

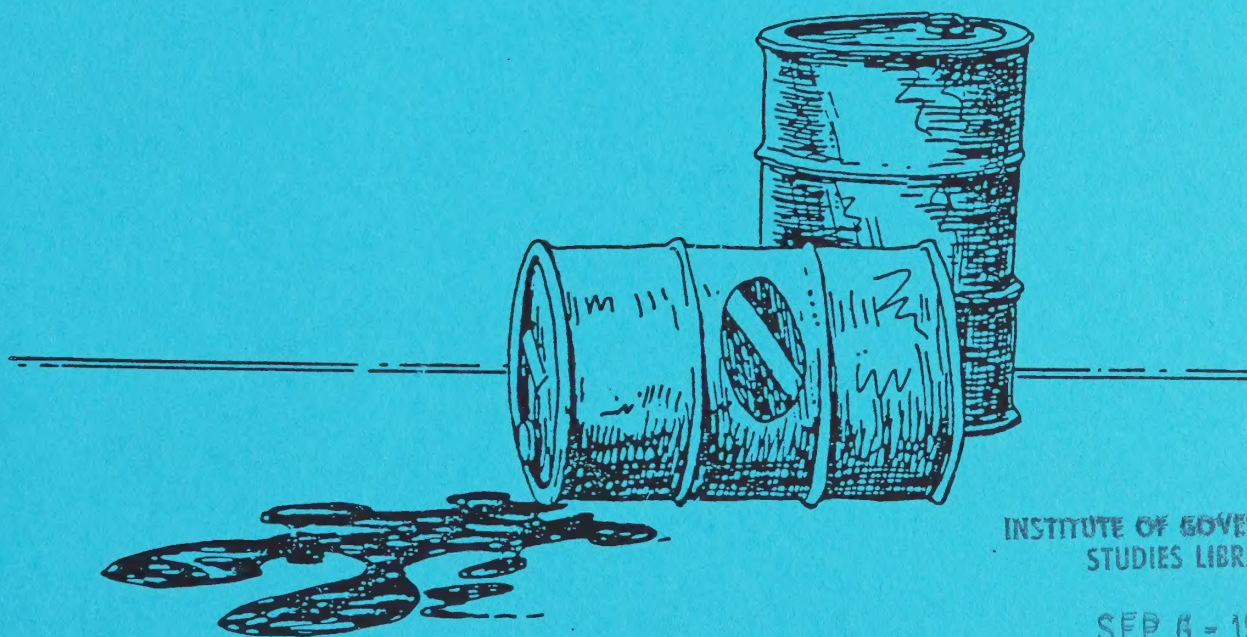
88 01626

v. 2

9/21/88

APPENDICES TO THE SAN FRANCISCO BAY AREA REGIONAL HAZARDOUS WASTE MANAGEMENT PLAN

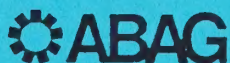
DRAFT
September 1, 1988



INSTITUTE OF GOVERNMENTAL
STUDIES LIBRARY

SEP 6 - 1988

UNIVERSITY OF CALIFORNIA



ASSOCIATION OF BAY AREA GOVERNMENTS

MetroCenter
Eighth & Oak Streets
Oakland
(415) 464-7900

Mailing Address:
P.O. Box 2050
Oakland, CA 94604-2050
Fax: (415) 464-7979

LIST OF APPENDICES IN THE SAN FRANCISCO BAY AREA
REGIONAL HAZARDOUS WASTE MANAGEMENT PLAN

	<u>page</u>
APPENDIX 1: List of Task Force Members	1-1
APPENDIX 2: Abbreviations and Acronyms	2-1
Glossary of Terms	2-2
APPENDIX 3: Conversion Table of Department of Health Services California Waste Categories to Waste Groups	3-1
APPENDIX 4: Standard Industrial Classification Codes	4-1
APPENDIX 5: Technical Memorandums and Issue Papers	
<i>Technical Memorandum No. 1:</i> <i>Related Regional Agencies, Local Implementing Agencies,</i> <i>and Legislation</i>	5-1
<i>Technical Memorandum No. 2:</i> <i>A Model to Forecast Hazardous Waste Levels in Bay Area</i> <i>Industries</i>	5-19
<i>Technical Memorandum No. 3:</i> <i>Defining Hazardous Wastes</i>	5-26
Attachment A	5-38
Attachment B	5-52
Attachment C	5-73
Attachment D	5-102
<i>Technical Memorandum No. 4:</i> <i>Forecasted Hazardous Waste Levels in the Year 2000</i>	5-113
<i>Technical Memorandum No. 5:</i> <i>A Review of Available Treatment and Destruction</i> <i>Technologies</i>	5-118

Technical Memorandum No. 6: A Review of Waste Minimization Practices: Implementation of the Hazardous Waste Management Hierarchy	5-129
Issue Paper No. 1: Implementable County Plans	5-150
Issue Paper No. 2: Alternatives to Land Disposal: A Hazardous Waste Management Hierarchy	5-154
Issue Paper No. 3: Proposed Public Involvement Program	5-157
Issue Paper No. 4: Regional Plan Objectives	5-159
Issue Paper No. 5: Siting Criteria: The Importance of Regional Consensus	5-160
Issue Paper No. 6: Draft Regional Policies	5-166
Issue Paper No. 7: Regional Plan Siting Goals and Criteria	5-168
Issue Paper No. 8: Intercounty Agreements and Local Authority: Is Local Control Possible?	5-170

APPENDIX 6: Waste Generation Projections Data for the year 2000 by County and for the San Francisco Bay Region (ABAG projections)	6-1
---	-----

All data in this appendix are arranged alphabetically by county and for the region. Data for each county and the region are incorporated into six tables and include:

Hazardous Waste Generation in 1986 and Projections for the Year 2000 by: Waste number, Waste group, SIC-code, and Industrial Sector (DHS Recommended Tables J, K);

Hazardous Waste Generation Projections by Industrial Sector for the Year 2000 Using Three Reduction Scenarios (no reduction, 10% and 40% reduction);

and Hazardous Waste Generation Projections by
Waste Group for the Year 2000 Using Three
Reduction Scenarios.

APPENDIX 7: DHS-Recommended Tables A - I, L - Q Based Upon
County Data

TABLE A: Quantities of Hazardous Waste Shipped Off-site in the Current Year	7-1
TABLE B: Current Regional Needs Assessment for Commercial Hazardous Waste Treatment/Disposal Capacity	7-2
TABLE C: Commercial Hazardous Waste Treatment/Disposal Facilities and Their Capacities and Quantities of Waste Treated or Disposed of in Current Year	7-3
TABLE D: Current Needs Assessment for Commercial Hazardous Waste Treatment/Disposal Capacity in Current Year	7-5
TABLE E: Quantities of Hazardous Waste Imported into Counties in the Current Year	7-7
TABLE F: Quantities of Hazardous Waste Exported from Counties in the Current Year	7-8
TABLE G: Commercial Hazardous Waste Storage Capacity and Activity in the Current Year	7-9
TABLE H: On-site Treatment/Disposal of Hazardous Waste in Current Year	7-10
TABLE I-1: Planning Estimates of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Manifested Wastes	7-11
TABLE I-2: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Cleanup Wastes	7-12
TABLE I-3: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Transfer Station Wastes	7-13
TABLE I-4: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Small Quantity Generator Wastes	7-14

TABLE I-5:	Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Household Wastes	7-15
TABLE I-6:	Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Total for Table I	7-16
TABLE L-1:	Projected Quantities of Clean-up Wastes in 2000 - Underground Tanks	7-17
TABLE L-2:	Projected Quantities of Clean-up Wastes in 2000 - Old Disposal Sites	7-18
TABLE L-3:	Projected Quantities of Clean-up Wastes in 2000 - Closed Toxic Pits	7-19
TABLE L-4:	Projected Quantities of Clean-up Wastes in 2000 - Other Cleanup Wastes	7-20
TABLE L-5:	Projected Quantities of Clean-up Wastes in 2000 - Table L Total	7-21
TABLE M-1:	Projected Quantities of New Hazardous Waste Streams - Additional Pretreatment Sludge	7-22
TABLE M-2:	Projected Quantities of New Hazardous Waste Streams - Other New Wastes	7-23
TABLE M-3:	Projected Quantities of New Hazardous Waste Streams - Totals	7-24
TABLE N-1:	Total Projected Quantities of Hazardous Waste Generation - Projected Industrial Waste	7-25
TABLE N-2:	Total Projected Quantities of Hazardous Waste Generation - Projected Clean-up Waste	7-26
TABLE N-3:	Total Projected Quantities of Hazardous Waste Generation - Projected New Wastes	7-27
TABLE N-4:	Total Projected Quantities of Hazardous Waste Generation - Projected Household Waste	7-28
TABLE N-5:	Total Projected Quantities of Hazardous Waste Generation - Total Projected Wastes	7-29
TABLE O-1:	Projected Commercial Hazardous Waste Treatment/Disposal Capacities - Capacity from Existing Facilities	7-30

TABLE O-2:	<i>Projected Commercial Hazardous Waste Treatment/ Disposal Capacities - Capacity from Proposed Facilities</i>	7-31
TABLE O-3:	<i>Projected Commercial Hazardous Waste Treatment/ Disposal Capacities - Loss of Capacity from Closing Facilities</i>	7-32
TABLE O-4:	<i>Projected Commercial Hazardous Waste Treatment/ Disposal Capacities - Total Projected Treatment Capacities by County</i>	7-33
TABLE P-1:	<i>Projected County Needs Assessment for Commercial Hazardous Waste Treatment Facilities - Projected County Capacity Requirement</i>	7-34
TABLE P-2:	<i>Projected County Needs Assessment for Commercial Hazardous Waste Treatment Facilities - Projected County Capacity</i>	7-35
TABLE P-3:	<i>Projected County Needs Assessment for Commercial Hazardous Waste Treatment Facilities - Projected Capacity Excess or Deficiency</i>	7-36
TABLE Q-1:	<i>Projected Quantities of Residuals Generation - Projected Capacity Requirement</i>	7-37
TABLE Q-2:	<i>Projected Quantities of Residuals Generation - Projected Quantity of Residuals</i>	7-38
	<i>References to DHS Tables</i>	7-39
APPENDIX 8:	<i>Regional Hazardous Waste Management Plan Notice of Preparation for EIR (Initial Study)</i>	8-1



Digitized by the Internet Archive
in 2024

<https://archive.org/details/c124896644>

Appendix 1

REGIONAL HAZARDOUS WASTE MANAGEMENT TASK FORCE

George Bergman
San Mateo County, Department of Environmental Management

Will Bruhns
Regional Waster Quality Control Board, San Franciso Bay Region

Sam Caddle, Task Force Chairman
Supervisor, District III, Solano County

Ann Coombs
Planning Commissioner, Santa Clara Co. Tanner Committee

Betty Croly
Assistant Planning Director, Alameda Co. Planning Department

Linda Curry
Hewlett Packard

Paul DeFalco
Chairman, Contra Costa Co. Hazardous Materials Commission

Phillip Duffy
Assistant Director, San Mateo Co. Environmental Health

Lesly Glatt
Sierra Club

Commander Chris Guild
Western Division Naval Facilities Engineering Command (Code 09B)

Ralph Hunter, Tanner Plan Coordinator
Napa County Environmental Health Department

Joseph Johnson / Bill Quan
San Francisco Solid Waste Management Program

Dan Kauffman
Chevron Corporation

Isao Kobashi / Rory Kessler
San Jose Office of the County Executive

Meredith Klein
League of Women Voters of the Bay Area

Delores Lutter
San Mateo Co. Environmental Health

Sharon Maves
Marin Co. Planning Department

Ken Mercer
Mayor, City of Pleasanton

Linda Morse
San Francisco Solid Waste Management Program

David Okita
Senior Civil Engineer, Contra Costa County Community Development

Robert Pendoley
Director, Solano Co. Environmental Management Dept.

Thomas Perardi / Jean Roggenkamp
Bay Area Air Quality Management District

Jack Saame
Sonoma County Tanner Commission

Peter Schneider
Romic Chemical Corporation

Christine Wright-Shacklett
Program Manager Hazardous Waste Management Planning,
Department of Health Services - Toxics Division

Ted Smith
Silicon Valley Toxics Coalition

June Snyder
East Bay Counties Dry Cleaners Assn.

Patricia Sullivan
BALIA Representative, Pacific Gas & Electric

Michael Sweeney, Task Force Vice-chairman
City of Hayward Councilmember

Dale Turnage
Universal Engineering, Inc.

Jack Vrmeer
Sonoma Co. Public Health Department

Appendix 2

ABBREVIATIONS AND ACRONYMS

ABAG	Association of Bay Area Governments
BAAQMD	Bay Area Air Quality Management District
CARB	California Air Resources Board
CEQA	California Environmental Quality Act
CHWMP	County Hazardous Waste Management Plan
CWRCB	California Water Resources Control Board
DHS	California Department of Health Services
DOE	Department of Energy
DOD	Department of Defense
EIR	Environmental Impact Report
EPA	U.S. Environmental Protection Agency
FWQC	Federal Water Quality Criteria
HWCL	(California's) Hazardous Waste Control Law
HWIS	DHS Hazardous Waste Information System
JPA	Joint Powers Agreement
MCL	Maximum Containment Levels
PG & E	Pacific Gas and Electric
RCRA	Resource Conservation and Recovery Act
RWQCB	Regional Water Quality Control Board
SDWA	Safe Drinking Water Act
SIC	Standard Industrial Classification code
SQG	Small Quantity Generators

APPENDIX 2

GLOSSARY OF TERMS

Acid - A large class of substances that form solutions having a low pH. Stronger acids are corrosive to metals and other materials. Acids may be neutralized by being mixed with bases or alkalis to form salts.

Acid Waste - A waste with a pH less than 7.0.

Activated Sludge Treatment - Exposing wastes to microorganisms and air. A portion of the organic matter is oxidized to carbon dioxide and waste and the other portion is synthesized into new microbial cells.

Acute - Effects which are manifested soon after exposure to a hazardous material.

Acutely Hazardous Materials - Any chemical on the list prepared by the EPA and classified as an acutely toxic material according to the criteria set forth in the Chemical Emergency Preparedness Program Interim Guidance document on November 1, 1985, and any supplemental amendments to the document. The list is published in 40 CFR Part 355.

Adsorption - A process for removing low concentrations of organic materials from gaseous and liquid waste streams. The organics are attracted to the surface of a substance, usually carbon.

Aerobic - Occurring in the presence of oxygen.

Alkaline Waste - A waste with a pH between 7.0 and 14.0. An alkaline waste is hazardous when its pH is 12.5 or greater.

Alternative Technology - Defined by DHS to mean the application of technology to the reduction of waste generation, promotion of recycling, and reuse of waste produced, as alternatives to land disposal of hazardous waste.

Ambient - Existing conditions of air, water and other mediums at a particular time.

Ambient Air Quality - Specified maximum average concentration of pollutants over stated lengths of time, allowed by air quality regulations of local, state or federal agencies.

Amendment - Formal changes to an adopted CHWMP. The CHWMP amendment process includes revision of the CHWMP at either scheduled intervals or as often as seen necessary. All or part of the CHWMP may be revised and amended as needed with the approval of the county, a majority of its cities containing a majority of the incorporated population, and the state DHS.

Anaerobic - Occurring in the absence of oxygen.

Aquifer - A geological formation, group of formations or part of a formation capable of yielding a significant amount of ground water to wells or springs. (CCR, Title 22, Section 66011.1)

At-Sea-Incineration - Wastes are burned in a conventional single-chamber incinerator which is mounted on a ship.

Authority to Construct - An authorization issued by APCDs and AQMDs. These are required prior to construction of proposed facilities which will emit a significant amount of pollutants into the atmosphere.

Base - A substance which forms a salt when it reacts with an acid. Bases have a pH greater than 7.0.

Best Feasible Hazardous Waste Management Technology - The best demonstrated available technologies as determined by DHS, or technologies which meet the current state and federal requirements for treatment and/or disposal.

Binding Arbitration - A process for the resolution of disputes. Decisions are made by an impartial arbitrator. The decisions of the arbitrator are final and acceptance of these decisions must be made in advance.

Bioaccumulative - Substances that increase in concentration in living organisms (that are not readily metabolized or excreted) as they breathe contaminated air, drink contaminated water, or eat contaminated food.

Biological Treatment - Treatment processes utilizing living microorganisms to decompose organic hazardous waste into simpler organic or inorganic substances. The five principal techniques include activated sludge, aerated lagoons, trickling filters, waste stabilization ponds, and anaerobic digestion.

Biosludge - Sludge generated in biological treatment of organic wastes, composed primarily of microorganisms.

Buffer Zone - An area of land which surrounds a hazardous waste activity area on which certain land uses are restricted. This is to protect the public's health and safety, and protect the environment from the migration of hazardous waste constituents.

Business Plan - A separate plan for each facility, site or branch of a business which includes an inventory of each chemical handled, the name and 24 hour phone number of the Emergency Coordinator, identification of emergency response equipment on site, emergency response procedures to be followed in the event of a release, an evacuation plan and procedures for coordination with local emergency response organizations. (Health and Safety Code Section 25501 (d)).

Calderon Bill - The popular name for legislation that requires the owner and/or operator of each solid waste disposal facility to test for and report toxic air emissions and hazardous waste leachate.

Cap - A layer of clay or other highly impermeable material installed over the top of a closed landfill to prevent entry of rainwater and minimize production of leachate.

Capacity Excess or Shortfall - The needs assessment compared to the existing capacity.

Carcinogen - Substance or agent which causes higher than normal production of abnormal cells; i.e., cancer.

Catalyst - A substance, usually present in small amounts relative to the reactants, that increases the rate of a chemical reaction without being consumed in the process.

Caustics (Bases, alkalis) - A large class of substances which form solutions having a high pH. Stronger caustics are corrosive to many materials. Caustics react with acids to form salts.

Cell - A portion of compacted solid wastes in a landfill that is enclosed by natural soil and/or cover material during a designated period.

Cement Kiln Incineration - The burning of organic wastes as a supplementary fuel at very high temperatures during the production of cement.

Chemical Abstract Service (CAS) Number - The unique identification number assigned by the Chemical Abstracts Service to a specific chemical substance.

Chemical Name - The scientific designation of a substance in accordance with the International Union of Pure and Applied Chemistry or the system developed by the Chemical Abstracts Service.

Chemical Oxidation - Adding strong oxidizing chemicals to a waste stream to effect a reaction, producing less toxic substances and reducing quantities of such substances, e.g., cyanide can be detoxified by reaction with hypochlorite or some other oxidizing agent.

Chemical Reduction - The addition of chemicals to wastes which cause partial or complete decomposition of particular waste components into their basic nontoxic parts.

Chemical Treatment - Treatment processes which alter the structure of hazardous waste constituents to produce an innocuous or less hazardous material. Principal techniques include neutralization, precipitation, ion exchange, chemical dechlorination, and chemical oxidation/reduction.

Chronic - Effects which are manifested following repeated exposures over a period of time or long-term exposure. Also refers to effects which linger.

Class I Land Disposal Facility - Land disposal facilities which conform to requirements of the regulations of the SWRCB for Class I units. They shall be located where natural geologic features provide optimum conditions for isolation of wastes from the waters of the state. Currently, these facilities may accept solid and dry hazardous waste. After 1990, they will be precluded from accepting any untreated hazardous wastes.

Class II Land Disposal Facility - Land disposal facilities which must be located where site characteristics and containment structures isolate wastes from the waters of the state. Class II land disposal facilities are suitable for wastes which have been granted a variance from hazardous waste management requirements pursuant to Section 66310, Title 22, CCR. (See definition of Designated Waste.)

Code of California Regulations - The compilation of regulations issued by California state agencies to implement state laws.

Common Name - Any designation or identification, such as a code name or number, trade name, or brand name, used to identify a hazardous substance other than by its chemical name.

Composting - A controlled microbial degradation of organic waste yielding a humus-like product of potential value as a soil conditioner.

Conditional Use Permit (CUP) - A discretionary permit, issued by cities and counties, which is required for certain projects that are allowable by special permit only. A conditional use permit imposes conditions on a project which are designed to assure that the project is compatible with the local general plan and zoning ordinances and that impacts to neighboring land uses are minimized.

Corrosive - Any substance which can, upon contact, dissolve standard materials, toxic contaminants or cause destruction of living tissue by chemical action.

Council of Governments (COG) - Chapter 1504 of the 1986 State Statutes (AB 2948, Tanner) references four specific COGs to receive funding for Regional Plan development. Associations of Governments, Joint Powers Agreements, etc. may be the mechanisms through which multi-jurisdiction hazardous waste management plans are developed which will have the same validity as those COG Plans specifically funded under the legislation.

County - ". . . a county that notifies the State Department of Health Services (SDHS) that it will prepare a hazardous waste management plan in accordance with this article and receives a grant pursuant to Section 25135.8. "County" also means any city, or two or more cities within a county acting jointly, which notifies the SDHS that it will prepare a county hazardous waste management . . ." (Chapter 1504 of the 1986 State Statutes (AB 2948, Tanner), Section 25135.1 (a)).

County Hazardous Waste Management Advisory Committee (CHWMAC) - The CHWMAC assists in the preparation of the CHWMP. The CHWMP is required by Chapter 1504 of the 1986 State Statute (AB 2948, Tanner). The law specifies a minimum number of members to be appointed to the CHWMAC and various interest groups they represent.

County Hazardous Waste Management Plan (CHWMP) - A hazardous waste management plan prepared pursuant to Chapter 1504 of the 1986 State Statute (AB 2948, Tanner). This bill authorized ". . . a county, in lieu of preparing the hazardous waste portion of the solid waste management plan, to adopt, by September 30, 1988, a county hazardous waste management plan pursuant to guidelines adopted by the State Department of Health Services

Countywide - The area of a county, including the cities and other entities (such as Indian, federal or state lands) within the boundaries of the county.

Criteria air pollutant - Pollutants for which the EPA has published a Criteria Document and which are regulated under the federal Clean Air Act. Criteria pollutants include PM₁₀, ozone, oxides of sulfur and nitrogen, and carbon monoxide.

Dechlorination - Removal or neutralization of toxic concentrations of chlorine from a substance.

Deepwell Injection - Disposal of wastes by injecting them into a geological formation deep in the ground. Wastes are often pretreated to prevent plugging the injection equipment and underground disposal zone.

Designated Waste - Hazardous waste which has been granted a variance from hazardous waste management requirements pursuant to Section 66310, Title 22, CCR. A variance may be granted if the waste is insignificant as a potential hazard to human health and safety, livestock or wildlife because of its small quantity, low concentration or physical or chemical characteristics. Designated wastes must be handled, stored or disposed in a manner which will not result in hazard to human health and safety, livestock or wildlife.

Developer - A person, government unit, or company that proposes to build a hazardous waste treatment, storage, or disposal facility.

Discretionary Project or Permit - A project or permit which requires the use of judgment or deliberation when the public agency or body decides to approve or disapprove a particular activity, as distinguished from situations where the public agency or body merely has to determine whether there has been conformity with applicable statutes, ordinances, or regulations.

Disposal - The discharge, deposit, injection, dumping, spilling, leaking or placing of any hazardous waste into or on any land or water so that such hazardous waste or any constituent hereof discharged into any waters, including ground waters. (Section 66042, Title 22, CCR).

Disposal Site - Location where any final deposition of hazardous waste occurs. (Title 22 Health & Safety Code, Chapter 30, Article 1).

Dissolution - To dissolve in water or an organic solvent.

Distillation - A process for separation of liquids with different boiling points by heating the mixture to vapor and retrieving certain components by recondensation. (An important application is solvent recovery.)

Drum Decantation - To pour only the liquid material from a drum leaving settled solids in the drum.

Electrostatic Precipitators - Devices that remove particles from a gas stream, by passing the gas through an electric field to charge the particles. The particles stick to the oppositely charged plate and are removed mechanically.

Eminent Domain - The right of a government to appropriate private property for necessary public use, with compensation paid to the landowner.

Environmental Impact Report (EIR) - A detailed statement prepared pursuant to the Environmental Quality Act (CEQA). An EIR describes and analyzes the significant environmental effects of a project and discusses ways to mitigate or avoid the adverse effects. The term "EIR" may mean either a draft or a final EIR, depending on the context. (Section 15362, CEQA Guidelines.)
Environmental Protection Agency (EPA) Waste Stream Code - The identification number assigned to a specific chemical waste or type of chemical waste pursuant to regulations of the EPA.

Epidemiology - The study of prevalent diseases in humans.

Evaporation - A process for concentrating non-volatile solids in solution by vaporizing the liquid portion, usually water. Solar evaporation utilizes uncovered ponds.

Exempt Waste - Wastes exempt from the permitting process and from reporting requirements, such as wastes which are recycled on-site and some wastes which are treated prior to discharge to sewers.

Exposure - Contact with a hazardous material. The most common routes of exposure are dermal (skin), oral (mouth), and inhalation (breathing).

Extremely Hazardous Material - A substance or combination of substances which, if human exposure should occur, may likely result in death, disabling personal injury or serious illness caused by the substance or combination of substances because of its quantity, concentration, or chemical characteristics. CCR, Title 22, Section 66060.

Extremely Hazardous Waste - Any hazardous waste or mixture of hazardous wastes which, if human exposure should occur, may likely result in death, disabling personal injury or serious illness caused by the hazardous waste or mixture of hazardous wastes because of its quantity, concentration, or chemical characteristics. Health and Safety Code, Section 25115.

Filtration - Separating liquids and solids and collecting the suspensions by passing solutions through various types of porous materials.

Fixation - A process whereby waste is made unchangeable and/or stationary.

Flammable - Materials which will burn below 140° F, either spontaneously or through handling as a result of coming in contact with already flaming material.

Fluidized-Bed Incineration - Wastes are injected into agitated beds of inert granular material and burned. Suitable for sludges and liquid wastes; solid waste may need grinding.

General Areas - Areas within the planning area which can be identified by specific boundaries.

Generator - The person or facility who, by nature or ownership, management, or control, is responsible for causing or allowing to be caused, the creation of hazardous waste.

Groundwater - Defined by the SWRCB to mean water found below the land surface and below the unsaturated zone; it is distinct from surface water.

Habitats of Threatened or Endangered Species - Areas known to be inhabited permanently or seasonally or known to be critical at any stage in the life cycle of any species of wildlife or vegetation identified or being considered for identification as "endangered" or "threatened" by the U.S. Department of Interior or the State of California.

Halogenated - Substances having a chlorine, bromine, fluorine, or iodine atom in their structure.

Halogenated Organics - A broad class of synthetic organic chemicals characterized by the addition of halogens (mainly chlorine, bromine, fluorine) to hydrocarbon compounds.

Hazardous Material - A substance or combination of substances which, because of its quantity, concentration, or physical, chemical or infectious characteristics, may either:

- o Cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
- o Pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of otherwise managed.

Hazardous Substance

1. Any substance designated pursuant to Section 1321 (b)(2) (A) of Title 33 of the United States Code.
2. Any element, compound, mixture, solution, or substance designated pursuant to Section 102 of the Federal Act (42 U.S.C. 9602).
3. Any hazardous waste having the characteristics identified under or listed pursuant to Section 6921 of Title 42 of the US Code, but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by act of Congress.
4. Any toxic pollutant listed under Section 1317 (a) of Title 33 of the US Code.
5. Any hazardous air pollutant listed under Section 7412 of Title 42 of the US Code.
6. Any imminently hazardous chemical substance or mixture with respect to which the Administrator of the EPA has taken action pursuant to Section 2606 of Title 15 of the US Code.
7. Any hazardous waste or extremely hazardous waste as defined by Section 25117 and 25115, respectively, unless expressly excluded. (Health and Safety Code Section 25316).

Hazardous Substances Account - A state fund derived from fees paid by persons who submit more than 500 pounds per year of hazardous or extremely hazardous waste to on- or off-site hazardous waste disposal facilities. This is the primary funding source for the state Superfund program.

Hazardous Waste - A waste, or a combination of wastes, which because of its quantity, concentration, or physical, chemical or infectious characteristics may either:

- o cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness.
- o pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

Hazardous Waste Control Account - An on-going state fund, derived from fees paid by operators of on- or off-side hazardous waste disposal facilities, which is the basic funding source for the State Department of Health Services' hazardous waste management program.

Hazardous Waste Element - That portion of a CoSWMP which addresses hazardous waste management.

Hazardous Waste Facility - All contiguous land, structures, other appurtenances, and improvements on the land, used for handling, treating, storing or disposing of hazardous wastes. (22 CCR Section 66096).

Hazardous Waste Management - The systematic control of the collection, source separation, storage, transportation, processing, treatment, recovery and disposal of hazardous waste. (22 CCR Section 66130)

Heavy Metals - Metallic elements having a high density (75 g/cm³) and that are toxic for the most part.

Herbicide - A chemical used to kill plants. A class of pesticides.

High Priority Wastes - Wastes which have properties particularly hazardous to human health (toxicity), can accumulate in living organisms (bioaccumulation), remain hazardous for long time periods (persistence), pose increased potential for air emissions due to their volatility, and cause groundwater contamination due to seepage through soil (mobility). They are wastes which contain pesticides, PCBs, cyanides, toxic metals, halogenated organics, or non-halogenated volatile organics.

Hydrogeology - The geology of ground water, with particular emphasis on the chemical composition and movement of the water.

Immobile Populations - Populations which are particularly difficult to evacuate, such as hospitals, nursing homes, schools, prisons, and jails.

Incentives -

- o Measures which provide benefits to communities above and beyond the costs associated with hazardous waste management facilities. Incentives would make a community better off than it was before a hazardous waste management facility is sited.
- o Certain measures (such as low interest loans, tax breaks, etc.) taken by government to stimulate the development and implementation of improved technologies for managing hazardous waste.

Incineration - A process for reducing the volume or toxicity of hazardous wastes by oxidation at high temperatures.

Inert - Exhibiting no chemical activity; totally unreactive.

Ion Exchange Irritant - Substances that are not corrosive, but can injure or inflame living tissue.

Ions - Chemical constituents of a solution having a positive or negative electrical charge.

Irritant - Substances that are not corrosive, but can induce inflammation of living tissue.

Joint Powers Agreement (JPA) - An agreement between two or more public agencies for the joint exercise of any power common to the contracting parties.

Judicial Review - Refers to legal evaluations made by the courts concerning administrative agency decisions and actions.

Land Disposal - Disposal, storage or treatment of hazardous wastes on or into the land, including, but not limited to deepwell injection, land spreading, co-burial with municipal garbage, using landfills, surface impoundments and waste piles.

Land Disposal Restrictions - Refers to the state and federal programs to progressively ban the land disposal of untreated hazardous wastes.

Landfarming (Land Application, Land Spreading) - A treatment technique which involves spreading the waste on land and utilizing evaporation and microbial action to degrade the wastes. (Not the same as landfilling.) Used primarily for crude oil wastes.

Leachate - The liquid that leaks out of a landfill. Leachate frequently contains contaminants dissolved from the waste in the landfill.

Leachate Collection System - A system that gathers leachate and pumps it to the surface for treatment.

Lead Agency - The public agency which has the principal responsibility for carrying out or approving a project. The lead agency will decide whether an EIR or Negative Declaration will be required for the project and will cause the document to be prepared.

Lethal Concentration Fifty (LC50) - A calculated concentration of a substance in air or water, exposure to which for a specified length of time is expected to cause death of 50% of an entire defined experimental animal population.

Lethal Dose Fifty (LD50) - A calculated dose of substance which is expected to cause death of 50% of an entire experimental animal population.

Liner - A relatively impermeable barrier designed to prevent leachate from leaking from a landfill. Liner materials include plastic sheets, dense clay, etc.

Listed Waste - Wastes "listed" by the EPA as hazardous by definition, even in instances where the "characteristics" may not apply.

Local Assessment Committee - Review group created by a host or abutting community to analyze a proposed hazardous waste management facility. In some states, including California, such committees have the authority to negotiate with the facility proponent (on behalf of the community) regarding the conditions under which the hazardous waste management facility may be built.

Management - The systematic control of the storage, transportation, processing, treatment, collection, source separation, recovery, and disposal of hazardous wastes. It includes administrative, financial, legal, and planning activities as well as the operational aspects.

Manifest (California Waste Hauler Record) - State form which indicates generator, transporter, disposer, operator, quantity and type of waste for each shipment of hazardous waste disposed of in off-site facilities.

Major Routes - State and interstate divided highways.

Mediation - A voluntary negotiation process in which a neutral mediator assists the parties in a dispute to reach a mutual agreement. A mediator may be appointed by OPA to resolve disputes between a developer and an LAC.

Memorandum of Agreement (MOA) or Memorandum of Understanding (MOU) - a written record between administrative agencies which clarifies or established joint procedures or authorities necessary to administer a program.

Microorganisms - In the context of biological treatment of wastes, microorganisms are microscopic bacteria, protozoa, fungi, and other living matter which degrade organic wastes.

Milk Run - A system in which properly equipped, permitted vehicles collect small amounts of compatible hazardous wastes from SQGs and transport them to off-site recycling or treatment facilities.

Ministerial - A governmental decision involving little or no personal judgment by the public official as to the decision or manner of carrying out the project. The public official merely applies the law to the facts as presented, but uses no special discretion or judgment in reaching a decision. A ministerial decision involves only the use of fixed standards or objective measurements, and the public official cannot use personal subjective judgment in deciding whether or how the project should be carried out. Common examples of ministerial permits include automobile registration, dog licenses, and marriage licenses.

Minor Routes - City street, boulevard, or undivided highway.

Mitigation - Includes:

1. avoiding the impact altogether by not taking a certain action or parts of an action.
2. minimizing impacts by limiting the degree or magnitude of the action and its implementation.
3. rectifying the impact by repairing, rehabilitating, or restoring the

impacted environment.

4. compensating for the impact by replacing or providing substitute resources or environments.

Monitoring Well - A well drilled near a hazardous waste management facility to allow groundwater to be sampled and analyzed for contamination.

Mutagenic - Causing alterations in the structure of genetic material of living organisms.

Multi-County - An area including two or more counties.

Need for Facility - A present or projected shortfall of facilities to meet local or multi-county waste management purposes. This includes facilities which provide more desirable or economical means of hazardous waste management and may serve greater than local needs.

Needs Assessment - The determination of the total required capacity (treatment and/or disposal). The needs assessment ignores existing capacity.

Negative Declaration - A written statement by the lead agency and subject to formal public review which briefly describes the reasons why a proposed project, not exempt from CEQA, will not have a significant effect on the environment and, therefore, does not require the preparation of an EIR. (Section 15371, CEQA Guidelines)

Negotiation - A process through which tradeoffs are made by parties in a dispute, to reach an agreement satisfying them all.

Neutralization - A treatment technology whereby acids and alkalis are reacted to form salts and water with a pH approaching neutral (7.0).

New Source - Within the context of air pollution control, this refers to a new facility or a modification of an existing facility which is a source of air pollution. (May cause restrictions on the development of some hazardous waste facilities.)

Non-attainment Area - Area whose ambient air levels of pollutants exceeds federal or state standards.

Nonhalogenated - Substances which do not contain halogens, such as chlorine, bromine, fluorine or iodine, and which evaporate at relatively low temperatures.

No Survey Method - A methodology presented by DHS which provide calculations to estimate the waste streams produced by each of the 22 industry groups, to be applied when county-specific data are lacking.

Offsets - Emission reductions required to be made at other facilities or on other equipment of the same owner in order to (more than) mitigate the increased emissions caused by a new source.

Off-site Hazardous Waste Facility - Operation involving handling, treatment, storage, or disposal of a hazardous waste in one or more of the following situations:

- o The hazardous waste is transported via commercial railroad, a public owned road or public waters, where adjacent land is not owned by or leased to the producer of the waste.
- o The hazardous waste is at a site which is not owned by, or leased to the producer of the waste.
- o The hazardous waste is at a site which receives hazardous waste from more than one producer.

On-site Hazardous Waste Facility - Operation involving handling, treatment, storage or disposal of hazardous waste on land owned by, or leased to, a waste generator, and which receives hazardous waste produced only by that generator. An operation that occurs after waste is transported by commercial railroad, or on public waters or on a public road shall be considered an on-site operation only if the producer of the waste owns at least 90% of the linear site and the area where the hazardous wastes are generated are on the same continuous property.

Organics - Chemical substances of animal or vegetable origin, of basically carbon structure, including hydrocarbons and their derivatives.

Organometallic Compounds - Organic molecules which incorporate metal atoms into their molecular structure.

Permit Streamlining Act (AB 884) - A California statute, enacted in 1977, which imposes time frames and requirements on governmental agencies' permitting processes for the development of projects.

Physical Treatment - Treatment processes which separate components of a waste stream or change the physical form of the waste without altering the chemical structure of the constituent materials.

Pickling Liquors - Corrosive liquids used for removing scale and oxides from metals.

Precipitation - The changing of a substance held in solution by adding a chemical to cause change into a solid form, thus allowing the solids to be gathered and removed from the liquids.

Pyrolysis - Heating toxic materials in an enclosed oxygen deficient space, resulting in a residual material of lower toxicity.

RCRA Generator - Generators producing more than 1000 kg (HSWA expands regulation to facilities generating over 100 kg) of hazardous waste per month.

Reactive - Having properties of explosivity or of chemical activity which can be a hazard to human health or the environment.

Recharge Zone - A land area where rainwater, infiltration from surface streams or impoundment areas, or other sources soak into the ground and enter an aquifer.

Recycling - Refers to the use or reuse of a waste as an effective substitute for a commercial product, or as an ingredient or feedstock in an industrial process. It also refers to the reclamation of useful constituent fractions within a waste material or removal of contaminants from a waste to allow it to be reused.

Refuse-Derived Fuel (RDF) - The combustible or organic fraction of municipal solid waste which has been prepared for use as a fuel by any of several mechanical processing methods.

Regional Plan - A plan prepared by one of the Councils of Governments designated under Chapter 1504 of the 1986 State Statute (AB 2948, Tanner) or by joint agreement between two or more counties under a legally constituted agency covering the planning area, which has the delegated authority to prepare a Regional Plan.

Release - Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

Research, Development and Demonstration Units (RD&Ds) - Either:

- o DHS-designated facilities located onsite, at the source of generation (which are exempt from the CHWMP consistency requirement); or
- o DHS-designated facilities located in industrial zones or in other zones, where, because of their temporary and experimental nature, they are granted a limited life conditional use permit by local government. Since they must be operated under the conditions of the local land-use permit, such facilities are consistent with the CHWMP.

Residuals Repository - A storage facility which accepts solid materials resulting from the treatment of hazardous wastes to standards established by the state Department of Health Services, or organic waste which is stabilized, solidified or encapsulated.

Resource Conservation and Recovery Act (RCRA) - A federal statute which gives the EPA the authority to develop a nationwide program to regulate hazardous wastes from "cradle-to-grave." Enacted in 1976, the Act was established to "protect human health and the environment from the improper handling of solid waste and encourage resource conservation."

Resource Recovery - The reuse or reclamation of any hazardous waste or any recyclable hazardous material (except those that are exempted by Section 25127.5 of the Health and Safety Code).

Responsible Agency - A public agency which proposes to carry out or approve a project, for which a Lead Agency is preparing or has prepared an EIR or Negative Declaration pursuant to CEQA. For the purposes of CEQA, the term "responsible agency" includes all public agencies other than the lead agency which have discretionary approval power over the project.

Rotary Kiln Incineration - the combustion of liquid or solid wastes in large cylinders lined with fire-brick and rotated to improve turbulence in the combustion zone.

Seiches - Vertically oscillating standing waves usually occurring in enclosed bodies of water such as lakes, reservoirs, and harbors caused by seismic activity, violent winds, or changes in atmospheric pressure.

Siting Criteria - Factors which must be met to determine an environmentally appropriate area for the location and design of a hazardous waste management facility.

Sludge - Waste materials in the form of a concentrated suspension of waste solids.

Small Quantity Generator (SQG) - Not defined in California regulation; however, it is accepted to mean one who generates 1,000 kilograms (2,200 pounds) or less of hazardous waste per month.

Solid Waste - Generally, under California law, all putrescible and nonputrescible solid and semisolid wastes such as garbage, rubbish, paper, ashes, industrial wastes, demolition and construction wastes, abandoned vehicles and parts thereof, discarded home and industrial appliances, manure, vegetable or animal solid and semisolid wastes, and other discharged solid and semisolid wastes; but excluding hazardous waste. (Section 66719 of the California Government Code, as amended by AB 1920, 1983.)

Solidification - A treatment process for limiting the solubility of or detoxifying hazardous wastes by producing blocks of treated waste with high structural integrity.

Solvent Extraction - Treating a solid or liquid waste to extract hazardous constituents so that it may be discarded as non-hazardous, along with the bulk of the waste stream.

Source Reduction - On-site practices which reduce, avoid or eliminate the generation of hazardous waste.

Special Wastes - A waste which is a hazardous waste only because it contains an inorganic substance or substances which cause it to pose a chronic toxicity hazard to human health or the environment and which meets all of the criteria and requirements pursuant to Section 66744. (22 CCR Section 66191)

Stabilization - A treatment process for limiting the solubility of or detoxifying hazardous wastes by adding materials which ensure that hazardous constituents are maintained in their least soluble and/or toxic form. Stabilization of treatment or incineration of residuals may be required prior to their final disposition in a residuals repository. Stabilization typically increases the volume of the waste materials.

Standard Industrial Classification (SIC) Code - The identification number assigned to specific types of businesses which systematically classifies all economic activities in the U.S., dividing them into groups and subgroups. The U.S. Government publishes the Standard Industrial Classification Manual which lists and describes all SIC code classifications.

State Override - Provision under which a state agency can override a local government's decision. This describes the state authority over hazardous waste management facility siting.

State Pre-emption - In the context of hazardous waste management facility siting, state pre-emption refers to the state pre-empting local decision-making authority over hazardous waste management facility siting such that no local decision is required to site such facilities.

Storage Facility - A hazardous waste facility at which hazardous waste is contained for a period greater than 144 hours at an off-site facility or for a period greater than 90 days at an on-site facility; a state permit is required for such activity.

Superfund - Refers to Federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) as amended by the Superfund Amendments and Reauthorization Act of 1986 and the California Hazardous Substance Bond Act of 1984 (Article 7.5 of Division 20 of the California Health and Safety Code). These provide funding for cleanup of sites contaminated with hazardous waste.

Surface Impoundments - A hazardous waste facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, usually in order to treat the wastes. These facilities are being phased out under the TPCA and RCRA.

Synergistic - The action of two materials together which is greater in effect than the sum of their individual actions.

Technical Reference Manual (TRM) - A multi-part document dated June 30, 1987, prepared by DHS which supports their Guidelines for the preparation of the CHWMP.

Teratogenic - Causing malformation of a fetus.

Toxic - Capable of producing injury, illness, or damage to humans, livestock or wildlife through ingestion, inhalation, or absorption through any body surface.

Toxic Substance Control Act - A federal law which, among other provisions, allows designated agencies to ban sale, use, or manufacture of certain compounds such as polychlorinated biphenyls (PCBs).

Toxic Waste - A waste which can produce injury upon contact with, or by accumulation in or on the body of a living organism.

Transfer Station - Any hazardous waste facility where hazardous wastes are loaded, unloaded, pumped or packaged. (22 CCR Section 66212)

Transportable Treatment Unit (TTU) - Hazardous waste treatment works which are designed to be moved either intact or in modules and which are intended to be operated at a given location for a limited period of time.

Transportation Route - Any major freeway or interstate highway designated under chapter 814 of the 1985 State Statutes (AB 1861, Campbell) which is used to transport hazardous waste or materials.

Treatment - Any method, technique, or process designed to change the physical, chemical or biological character or composition of any hazardous waste so as to neutralize, recover energy or material resources, and render such waste less hazardous so that it is safer to transport, store or dispose of; or amenable for recovery, storage, or reduce in volume. (22 CAC Section 66216)

Variance - An exemption from the DHS's permitting process which is granted under special, stated conditions. Notification of variances are sent to the local environmental health and land use planning departments and such facilities are still subject to local land use permits.

Waste - Any waste for which no use or reuse is intended and which is to be discarded.

Waste Exchange - Clearinghouse approach to transferring treated and untreated hazardous wastes to an industrial user for use as raw material.

Appendix 3

CONVERSION OF CALIFORNIA WASTE CATEGORIES TO WASTE GROUPS

<u>Waste Group</u>	<u>California Waste Category</u>
1. Waste Oil	221 Waste Oil and Mixed Oil 223 Unspecified Oil Containing Waste
2. Halogenated Solvents	211 Halogenated Solvents 741 Liquids With Halogen. Org. Comp. > 1000 mg/l
3. Non-Halogenated Solvents	212 Oxygenated Solvents 213 Hydrogen Solvents 214 Unspecified Solvent Mixtures
4. Organic Liquids	133 Aqueous with Total Organics > 10% 134 Aqueous with Total Organics < 10% 341 Organic (Nonsolvents) Liquids with Halogens 342 Organic Liquids with Metals 343 Unspecified Organic Liquid Mixtures
5. Pesticides	231 Pesticide Rinse Water 232 Pesticides and Pesticide Production Waste
6. Dioxins	261 Polychlorinated Biphenyls 731 Liquids With PCBs > 50 mg/l 801 Waste Potentially Containing Dioxins
7. Oily Sludges	222 Oil/Water Separation Sludge 352 Other Organic Solids 481 Tetraethyl Lead Sludge
8. Halogenated Organic Sludges & Solids	251 Still Bottoms with Halogenated Organics 351 Organic Solids with Halogens 451 Degreasing Sludge 751 Solids with Halogen. Org. Comp. > 1000 mg/kg
9. Non-Halogenated Organic Sludges & Solids	241 Tank Bottom Waste 252 Other Still Bottom Waste

* California Department of Health Services, Toxic Substances Control Division. Technical Reference Manual for the Preparation of Hazardous Waste Management Plans, June 30, 1987.

	321 Sewage Sludge
	471 Paper Sludge/Pulp
	491 Unspecified Sludge Waste
	571 Fly Ash, Bottom Ash and Retort Ash
10. Dye & Paint Sludge & Resins	271 Organic Monomer Waste
	272 Polymeric Resin Waste
	281 Adhesives
	291 Latex Waste
	461 Paint Sludge
11. Metal-Containing Sludges	171 Metal Sludge
12. Metal-Containing Liquids	111 Acids with Metals
	121 Alkaline with Metals
	132 Aqueous with Metals
	721 Liquids with Arsenic > 500 mg/l
	722 Liquids with Cadmium > 100 mg/l
	723 Liquids with Chromium > 500 mg/l
	724 Liquids with Lead > 500 mg/l
	725 Liquids with Mercury > 20 mg/l
	726 Liquids with Nickel > 134 mg/l
	727 Liquids with Selenium > 100 mg/l
	728 Liquids with Thallium > 130 mg/l
13. Cyanide & Metal Liquids	711 Liquids with Cyanides > 1000 mg/l
14. Non-Metallic Inorganic Liquids	112 Acid Without Metals
	113 Unspecified Acid
	122 Alkaline without Metals
	123 Unspecified Alkaline
	131 Aqueous with Reactive Anions
	135 Unspecified Aqueous Solution
	791 Liquids with pH < 2
15. Non-Metallic Inorganic Sludges	411 Alum and Gypsum Sludge
	421 Lime Sludge
	431 Phosphate Sludge
	441 Sulfur Sludge
	521 Drilling Mud Contaminated
16. Soil	611 Contaminated Soil
17. Miscellaneous Wastes	141 Off-Spec, Aged or Surplus Inorganics
	151 Asbestos-Containing Waste
	161 Fluid Catalytic Cracker Waste
	162 Other Spent Catalyst
	172 Metal Dust
	181 Other Inorganic Solid Waste

311 Pharmaceutical Waste
322 Biological Waste Other Than
Sewage Sludge
331 Off-Spec, Aged or Surplus
Organics
511 Empty Pesticide Containers
> 30 gal.
512 Other Empty Containers > 30 gal.
513 Empty Containers < 30 gal.
531 Chemical Toilet Waste
541 Photochemicals/Photoprocessing
Waste
551 Laboratory Waste Chemicals
561 Detergent and Soap
581 Gas Scrubber Waste
591 Baghouse Waste
612 Household Wastes

Appendix 4

STANDARD INDUSTRIAL CLASSIFICATION CODES FOR EACH INDUSTRIAL SECTOR

Agriculture, forestry, and fishing

1. Agriculture production - crops
2. Agriculture production - livestock
7. Agriculture services
8. Forestry
9. Fishing, hunting, and trapping

Mining

10. Metal mining
11. Anthracite mining
12. Bituminous coal and lignite mining
13. Oil and gas extraction
14. Mining and quarrying of nonmetallic minerals, except fuels

Construction

15. Building construction - general contractors and operative builders
16. Construction other than building construction - general contractors
17. Construction - special trade contractors

Manufacturing

20. Food and kindred production
21. Tobacco manufactures
22. Textile mill products
23. Apparel and other finished products made from fabrics and similar materials
24. Lumber and wood products, except furniture
25. Furniture and fixtures
26. Paper and allied products
27. Printing publishing, and allied industries
28. Chemical and allied products
29. Petroleum refining and related industries
30. Rubber and miscellaneous plastics products
31. Leather and leather products
32. Stone, clay, glass, and concrete products
33. Primary metal industries
34. Fabricated metal products, except machinery and transportation equipment
35. Machinery, except electrical
36. Electrical and electronic machinery, equipment, and supplies
37. Transportation equipment
38. Measuring, analyzing, and controlling instruments; photographic, medical, and optical goods; watches and clocks
39. Miscellaneous manufacturing industries

Transportation, communications, electric, gas, and sanitary services

- 40. Railroad transportation
- 41. Local and suburban transit and interurban highway passenger transportation
- 42. Motor freight transportation and warehousing
- 43. U.S. Postal Service
- 44. Water transportation
- 45. Transportation by air
- 46. Pipe lines, except natural gas
- 47. Transportation services
- 48. Communication
- 49. Electric, gas and sanitary services

Wholesale trade

- 50. Wholesale trade - durable goods
- 51. Wholesale trade - nondurable goods

Retail trade

- 52. Building materials, hardware, garden supply, and mobile home dealers
- 53. General merchandise stores
- 54. Food stores
- 55. Automotive dealers and gasoline service stations
- 56. Apparel and accessory stores
- 57. Furniture, home furnishings, and equipment stores
- 58. Eating and drinking places
- 59. Miscellaneous retail

Finance, insurance, and real estate

- 60. Banking
- 61. Credit agencies other than banks
- 62. Security and commodity brokers, dealers, exchanges, and services
- 63. Insurance
- 64. Insurance agents, brokers, and service
- 65. Real estate
- 66. Combinations of real estate, insurance, loans, law offices
- 67. Holding and other investment offices

Services

- 70. Hotels, rooming houses, camps, and other lodging places
- 72. Personal services
- 73. Business services
- 75. Automotive repair, services, and garages
- 76. Miscellaneous repair services
- 78. Motion pictures
- 79. Amusement and recreation services, except motion pictures
- 80. Health services
- 81. Legal services

- 82. Education services
- 83. Social services
- 84. Museums, art galleries, botanical and zoological gardens
- 86. Membership organizations
- 88. Private households
- 89. Miscellaneous services

Public administration

- 91. Executive, legislative, and general government, except finance
- 92. Justice, public order, and safety
- 93. Public finance, taxation, and monetary policy
- 94. Administration of human resources programs
- 95. Administration of environmental quality and housing programs
- 96. Administration of economic programs
- 97. National security and international affairs

Nonclassifiable establishments

- 99. Nonclassifiable establishments

A P P E N D I X 5

TECHNICAL MEMORANDUMS AND ISSUE PAPERS

APPENDIX 5

TECHNICAL MEMORANDUMS AND ISSUE PAPERS

TABLE OF CONTENTS

	<u>Page</u>
Technical Memorandum No. 1: Related Regional Agencies, Local Implementing Agencies, and Legislation	5-1
Technical Memorandum No. 2: A Model to Forecast Hazardous Waste Levels in Bay Area Industries	5-19
Technical Memorandum No. 3: Defining Hazardous Wastes	5-26
Attachment A	5-38
Attachment B	5-52
Attachment C	5-73
Attachment D	5-102
Technical Memorandum No. 4: Forecasted Hazardous Waste Levels in the Year 2000	5-113
Technical Memorandum No. 5: A Review of Available Treatment and Destruction Technologies	5-118
Technical Memorandum No. 6: A Review of Waste Minimization Practices: Implementation of the Hazardous Waste Management Hierarchy	5-129
Issue Paper No. 1: Implementable County Plans	5-150
Issue Paper No. 2: Alternatives to Land Disposal: A Hazardous Waste Management Hierarchy	5-154
Issue Paper No. 3: Proposed Public Involvement Program	5-157
Issue Paper No. 4: Regional Plan Objectives	5-159
Issue Paper No. 5: Siting Criteria: The Importance of Regional Consensus	5-160

Issue Paper No. 6:	
Draft Regional Policies	5-166
Issue Paper No. 7:	
Regional Plan Siting Goals and Criteria	5-168
Issue Paper No.8:	
Intercounty Agreements and Local Authority: Is Local Control Possible?	5-170



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

S. L. Tu, S. Echeverria

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING RELATED REGIONAL AGENCIES, LOCAL IMPLEMENTING AGENCIES, AND LEGISLATION

Technical Memorandum No. 1

July 1987

INTRODUCTION

This memorandum is divided into three parts. First are listed major Federal and State legislation closely related to the hazardous waste management planning (AB 2948) process, as well as very brief descriptions of each legislation's basic purpose. The Regional and State agencies following each listing are those either responsible for or which have related programs to the listed legislation. The second part lists regional and State agencies (and contact persons) which are closely related to or are impacted by the hazardous waste planning process. For each agency, the relevant legislation is provided. These first two sections are intended as a guide for county planners who have to assure consistency between their plans and regional programs. The third part identifies county and city agencies which are implementing State programs - of which there are three commonly found: underground storage tanks; SB 2185 data management; and memoranda of understanding with DHS.

I. LEGISLATION AND BASIC PURPOSES

FEDERAL LEGISLATION

- 1976 RESOURCE CONSERVATION AND RECOVERY ACT (RCRA):

A federal statute which contains Environmental Protection Agency's (EPA's) legal authority to regulate the disposal of hazardous wastes, and envisions federal-state-regional-local cooperation in hazardous waste planning and regulation.

- 1980 SUPERFUND (COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT: CERCLA):

A fund is created to be utilized to clean up inactive abandoned waste sites, as well as to finance response to emergency situations. The statute deals with response, clean-up, compensation, and liability of current or past disposal of hazardous wastes.

- 1984 RCRA-HAZARDOUS SOLID WASTE AMENDMENTS (RCRA-HSWA):

Formulating strategies to monitor the potential effects of active hazardous waste disposal sites on ground water quality

- 1986 SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT (SARA)
TITLE III:

Mandate a new federal program for state and local governmental planning for response to emergencies caused by unauthorized releases of toxic and hazardous materials. It requires that businesses that handle any of the "extremely hazardous substances" on EPA's Chemical Emergency Preparedness Program (CEPP) list provide local agencies with data regarding these materials, and inform the agencies of any unauthorized discharges.

- FEDERAL WATER POLLUTION CONTROL ACT (FWPCA: THE CLEAN WATER ACT):

This act eliminated the discharge of unregulated pollutants into navigable waters. Permission to discharge, as defined, occurs through a National Pollutants Discharge Elimination Permit (NPDEP) from an authorized agency. In California, these permit are issued by the Regional Water Quality Control Boards (RWQCBs).

- SAFE DRINKING WATER ACT (SDWA):

This act requires EPA to establish Maximum Contaminants Level (MCL) for all contaminants which may have an adverse effect on the public health, or to designate treatment techniques to reduce the level of contaminants. It regulates underground injection wells, which are given a permit by State rules.

- TOXIC SUBSTANCES CONTROL ACT (TSCA):

It regulates the manufacture, distribution in commerce, processing, use, or disposal of chemical substances or mixtures which may present an unreasonable risk of injury or health to human, as well as damage to the environment.

STATE LEGISLATION

(Note: DHS: STATE DEPARTMENT OF HEALTH SERVICES
 RWQCB: REGIONAL WATER QUALITY CONTROL BOARD
 CWMB: CALIFORNIA WASTE MANAGEMENT BOARD
 SWRCB: STATE WATER RESOURCES CONTROL BOARD
 BAAQMD: BAY AREA AIR QUALITY MANAGEMENT DISTRICT
 OES: GOVERNOR'S OFFICE OF EMERGENCY SERVICES

These agencies are listed after each item of State legislation on the basis of responsibility or related programs.)

- AB 2948 (Tanner Bill, 1986):

Provides counties with authority and state money to develop countywide plans for the management and reduction of hazardous wastes, including future siting of needed new facilities by June 30, 1987:

DHS; RWQCB; CWMB; SWRCB; BAAQMD; OES

- AB 46 (Tanner, 1987):

Allocates funds to counties and Council of Governments to implement the Tanner Plans:

DHS; RWQCB; CWMB; SWRCB; BAAQMD; OES

- SB 477 (Green, 1987):

Requires cities, in addition to counties, to conform with the general hazardous waste management Tanner Plan :

DHS; RWQCB; CWMB; SWRCB; BAAQMD; OES

- AB 617 (Tanner, 1987, not signed into law yet):

Authorizes DHS to grant counties three months extension on their formulated Tanner Plan:

DHS; RWQCB; CWMB; SWRCB; BAAQMD; OES

- AB 2185/ 87 (Waters, 1985-87):

Requires any business which handles a hazardous material and is located within an implementing city or county to establish a plan within six months of adoption of the OES regulations for emergency response to a release or threatened release of the hazardous substance. The businesses are required to report certain releases or threatened releases, and are also required to submit an annual disclosure statement to a city or county:

DHS; OES

- AB 3777 (La Follette, 1986):

Detailed planning for risk management and prevention at businesses handling "acutely hazardous materials (AHMs)" on EPA's CEPP list, which expanded the statewide hazardous material inventory and emergency response programs mandated by AB 2185:

DHS; OES

- AB 1059 (La Follette):

A cleanup legislation of AB 3777:

DHS; OES

- AB 2239 (Sher, 1985):

Mandates existing laws requiring the local agencies permitting of underground storage tanks to be implemented by January, 1988:

DHS; WRCB; RWQCB; SWRCB

- AB 1803 (1983)

Health and Safety Code, Section 4026.1 & 4026.2: Monitoring organic chemical contaminants in public drinking water through well testing:

DHS; RWQCB; SWRCB

- AB 1809 (Tanner, 1985):

Requires each county Solid Waste Management Plan to include a program for the safe management of household generated hazardous wastes by July 1986. It also requires each product requiring disposal as a household hazardous waste to contain specific labels providing consumer information regarding disposal:

DHS; CWMB

- AB 0685 (Farr, 1985):

Enacts the Hazardous Wastes Reduction, Recycling, and Treatment Research and Demonstration Act of 1985 requiring the funding for grants and demonstration of technologies and appropriates \$ 1 million annually for hazardous waste reduction research and demonstration efforts to be sponsored by DHS:

DHS; CWMB

- AB 3750 (Cortese, 1986):

Requires the DHS to compile a list of hazardous wastes and substances sites, to update the list at least annually, and to distribute the list to cities and counties in which the sites are located. It further requires that each applicant for a development project to submit a signed statement indicated whether the project is located on a tested site:

DHS; CWMB

- AB 2370 (1980):

Sets procedures for the determination by the DHS of a border zone for the property containing hazardous wastes and allows restrictions as to the use of such property:

DHS; CWMB

- SB 1406 (Petrus, 1986):

Requires specific written disclosures to prospective transferees of real property improved with one to four dwelling units, including information concerning landfills or other soil problems on the property:

DHS; CWMB

- SB 1500 (Roberti, 1986):

Enacts the Hazardous Wastes Management Act of 1986 and prohibits the land disposal of untreated hazardous waste by May, 1990, and requires the DHS to adopt treatment standards on or before that date:

DHS; CWMB

- Proposition 65 (Safe Drinking Water and Toxic Enforcement Act, 1986): Regulating carcinogenic chemicals in the drinking water and as addition to food as additives:

DHS; RWQCB; SWRCB

- California Administrative Code (CAC), Title 22, Division 4, Chapter 30: Detailed criteria in determining the classes of waste management units (whether a waste falls into the "restricted hazardous" or "hazardous" categories):

DHS; CWMB

- California Administrative Code (CAC), Title 23, Chapter 3, Subchapter 15 - Waste Disposal to Land: Governs waste disposal to land and establishes a disposal site and waste classification system on a statewide basis:

DHS; CWMB

- CAC, Title 22, Division 4, Chapter 15: State drinking water standards are designated to protect waters for domestic and municipal supplies:

DHS; RWQCB; SWRCB

- SWRCB Title 26, Section 23-2510-2610:

Sets regulations pertaining to water quality aspects of waste discharge to land and establishes waste management requirements for treatment, storage, and disposal in landfill, surface impoundments, waste piles, and land treatments. Set construction, monitoring, closure, reporting, repair, and permit requirements for underground storage tanks:

RWQCB; SWRCB

- Porter-Cologne Water Quality Control Act:

Empower RWQCBs and SWRCB to establish and enforce regulations and policies to protect water quality within the State. The RWQCBs may issue cleanup and abatement orders for violators of discharge requirements:

RWQCB; SWRCB

- AB 3566 (Katz, 1984):

It enacts the Toxic Pits Cleanup Act of 1984 and prohibits the discharge of liquid hazardous waste into a surface impoundment within one half mile of a potential source of drinking water after June 1988, and sets reporting and other discharge requirements regarding the discharge of liquid hazardous waste into surface impoundments:

DHS; RWQCB; SWRCB

- AB 2958 (Connelly, 1985):

It enacts the Toxic Injection Well Control Act of 1985 which regulates the injection of hazardous wastes into underground wells after January 1988 if the well is within one half mile of drinking water and otherwise regulates the use of the injection wells for the disposal of hazardous wastes:

RWQCB; SWRCB; DHS

- AB 1807 (Tanner, 1983):

This bill authorized a comprehensive regulatory framework for the evaluation and control of the toxic air contaminants (TACs). The bill closely delineated the roles and responsibilities of these agencies: Air Resources Board, State DHS, State Department of Food and Agriculture, and local Air Quality Control Districts (e.g., BAAQMD). It created an independent science review panel. It also established strict time lines for the evaluation and adoption of regulations regarding TACs, both at state and local levels:

DHS; BAAQMD;

- AB 1021 (Sher, 1985)

This bill appropriated \$100,000 to the State Air Resources Board for a study of the use and management of toxic gases. It established goals in five major aspects as follows: 1) transportation of the toxic gases; 2) public information program; 3) model emergency response plans; 4) model ordinance governing the storage, use, and handling of the toxic gases; and 5) training guidelines for public safety and industry personnel :

DHS; BAAQMD

- SB 509 (Carpenter, 1985):

Requires incineration of hazardous wastes having a heating value of more than 3,000 Btu's after January 1988 and sets other requirements for the disposal of volatile organic compounds:

BAAQMD

- AB 2457 (Young, 1984):

Transfers enforcement, inspection and registration of cargo and vehicle tanks carrying flammable and combustible liquids to the Commissioner and Department of California Highway Patrol (CHP). It also authorizes the Department of Transportation to approve local regulations on the restriction or prohibition of use of tunnels on state highways for vehicles transporting hazardous materials:

OES

II. REGIONAL/STATE AGENCIES

DEPARTMENT OF HEALTH SERVICES (DHS), TOXIC SUBSTANCES CONTROL DIVISION

Stephen Onstot, Waste Management Engineer, DHS, 4250 Power
Inn Rd., Sacramento, CA 95826;

Jennifer Tachera, Legislation Liason, Sacramento

Daniel Murphy, Permit Unit, N. Coast Calif. Section. (415)540-
3487; or Judith Henley, (415) 540-3548. 5850 Shellmound, Suite
390, Emeryville, CA 94608

- AB 2948 (Tanner Bill, 1986)
- AB 46 (Tanner, 1987)
- SB 477 (Green, 1987)
- AB 617 (Tanner, 1987, not signed into law yet)
- AB 3777 (La Follette, 1986)
- AB 1059 (La Follette)
- AB 1809 (Tanner, 1985)
- AB 2239 (Sher, 1985)
- AB 1803 (1983)
- AB 0685 (Farr, 1985)
- AB 3750 (Cortese, 1986)
- AB 2370 (1980)
- AB 1021 (Sher, 1985)
- SB 1406 (Petrus, 1986)
- SB 1500 (Roberti, 1986)
- AB 3566 (Katz, 1984)
- AB 2958 (Connelly, 1985)
- Proposition 65 (Safe Drinking Water and Toxic Enforcement
Act, 1986)
- California Administrative Code (CAC), Title 22, Division 4,
Chapter 30
- CAC, Title 22, Division 4, Chapter 15
- CAC, Title 23, Chapter 3,
Subchapter 15 - Waste Disposal to Land

REGIONAL WATER QUALITY CONTROL BOARD (RWQCB)

Richard Whitsel, Chief of Planning, (415)464-1255, 1111 Jackson
St., 4th Fl. Rm 400, Oakland, CA 94607

- WRCB Title 26, Section 23-2510-2610
- Porter-Cologne Water Quality Control Act:
- AB 1803 (1983) Health and Safety Code, Section 4026.1 &
4026.2
- AB 2239 (Sher, 1985)
- AB 3566 (Katz, 1984)
- AB 2958 (Connelly, 1985)
- CAC, Title 22, Division 4, Chapter 15: State drinking water
- CAC, Title 23, Chapter 3, Subchapter 15
- Proposition 65 (Safe Drinking Water and Toxic Enforcement
Act, 1986)

STATE WATER RESOURCES CONTROL BOARD (SWRCB)

Dr. David Cohen, Chief, Investigation Section, Division of
Water Quality, (916)322-8410, P.O. Box 100, Sacramento, CA 95810

- WRCB Title 26, Section 23-2510-2610
- Porter-Cologne Water Quality Control Act
- AB 1803 (1983)
- AB 2239 (Sher, 1985)
- AB 3566 (Katz, 1984)
- AB 2958 (Connelly, 1985)
- CAC, Title 22, Division 4, Chapter 15
- CAC, Title 23, Chapter 3, Subchapter 15
- Proposition 65 (Safe Drinking Water and Toxic Enforcement Act, 1986)

BAY AREA AIR QUALITY MANAGEMENT DISTRICT (BAAQMD)

Ted McHugh, Public Information Officer, (415)771-6000.
939 Ellis St. San Francisco, CA 94109;
Dario Levaggi & Terry Lee, (415)763-9604

- AB 1807 (Tanner, 1983)
- AB 1021 (Sher, 1985)
- SB 509 (Carpenter, 1985)

GOVERNOR'S OFFICE OF EMERGENCY SERVICES (OES)

Dr. Frederick Lercari, (916)427-4990, 2800 Meadowview Rd.,
Sacramento, CA 95832.
Eileen Baumgardner, Regional Manager, Region 2, (415)671-4908,
360 Civic Drive, Suite 1, Pleasant Hill, 94523

- AB 2185/ 87 (Waters Bill)
- AB 2457 (Young, 1984)

CALIFORNIA WASTE MANAGEMENT BOARD (CWMB)

John Rowden, (916)322-6329, Chief, Standard, Regulation, and
Advanced Technologies Division, CWMB, 1020 9th St. Suite 300,
Sacramento, CA 95814
Sue O'Leary, Technical Program, (916)322-1391

- AB 1809 (Tanner, 1985)
- AB 0685 (Farr, 1985)
- AB 3750
- AB 2370 (1980)
- SB 1406 (Petriss, 1986)
- SB 1500
- CAC, Title 22, Division 4, Chapter 30
- CAC, Title 23

Assemblywoman Sally Tanner: (916)445-7783, Sacramento

ASSOCIATION OF BAY AREA GOVERNMENTS (ABAG)

Terry Bursztynsky, Director, Hazardous Materials Programs.
(415)464-7951, P.O. Box 2050, Oakland, CA 94604

III. LOCAL IMPLEMENTING AGENCIES FOR STATE/FEDERAL PROGRAMS

This section contains a list of counties and cities (where appropriate) that are implementing State/Federal programs. Counties and cities that are also implementing local ordinances are not listed. The State and Federal programs are abbreviated:

- o UST - Underground Storage Tank (Sher bill, 1985 - AB 2239)
- o AB 2185 - Emergency Response/Community Right to Know (Waters bill, 1985-87)
- o MOU - Memorandum of Understanding with the Department of Health Services to inspect and collect data regarding local hazardous waste generators.

ALAMEDA COUNTY - UST, AB 2185, MOU

Division of Environmental Health
470 - 27th Street, Room 325
Oakland, CA 94612

Rafat Shahid (415) 874-7237
Chief of Hazardous Materials Division

Cities that are the implementing agencies for State/Federal Programs
the County implements the programs for cities that are not listed

(1) Berkeley - UST, AB 2185

Department of Health and Human Services
2180 Milvia Street
Berkeley, CA 94704

Vince Spencer (415) 644-6510
Acting Chief, Environmental Health

(2) Fremont - UST, AB 2185

Fremont Fire Department
4200 Mowry Avenue
Fremont, CA 94538-1298

Kenneth J. Slamon, Jr. (415) 791-4282
Battalion Chief

(3) Hayward - UST, AB 2185

Hayward Fire Department
22300 Foothill Blvd., Room 814
Hayward, CA 94541

Suzanne Larson (415) 784-8693
Hazardous Materials Specialist

(4) Newark - UST, AB 2185

Newark Fire Department
37101 Newark Blvd.
Newark, CA 94560

Jackie Bretschneider (415) 793-1400
Hazardous Materials Specialist

(5) Pleasanton - UST, AB 2185

Pleasanton Fire Department
P.O. Box 520
Pleasanton, CA 94566-0802

Rick Mueller (415) 847-8114
Chemical Specialist

(6) San Leandro - UST, (County is responsible for AB 2185)

San Leandro Fire Department
901 E. 14th Street
San Leandro, CA 94577

Steve Mikinka (415) 577-3318
Deputy Chief

(7) Union City - UST, AB 2185

Union City Fire Department
34009 Alvarado-Niles Road
Union City, CA 94587

Chris (Knoblock) Boykin (415) 471-1424
Hazardous Materials Program Manager

CONTRA COSTA COUNTY - UST, AB 2185

For UST

Department of Health Services
111 Ward Street
Martinez, CA 94553

Greg Lawler (415) 372-2286
Occupational Health Specialist

For AB 2185

Department of Health Services
111 Ward Street
Martinez, CA 94553

Jim Obermiller (415) 372-2286
Occupational Health Specialist

MARIN COUNTY - UST, AB 2185

Department of Environmental Health
Marin Civic Center, Room 285
San Rafael, CA 94903

Tim Underwood
Registered Sanitarian

(415) 499-6907

Local cities that are the implementing agency for State/Federal Programs.
the County implements the programs for cities that are not listed

(1) San Rafael - UST, AB 2185

San Rafael Fire Department
1039 "C" Street
San Rafael, CA 94901

Keith Schoenthal
Captain/Hazardous Materials Specialist

(415) 485-3308

NAPA COUNTY - UST, AB 2185

Department of Environmental Health
1195 Third Street, Room 205
Napa, CA 94559

Trent Cave
Director of Environmental Health

(707) 253-4471

SAN FRANCISCO (CITY AND COUNTY) - UST, AB 2185

Department of Environmental Health
101 Grove Street, Room 220
San Francisco, CA 94102

Bruce Tsutsui
Hazardous Materials Program Manager

(415) 558-5141

SAN MATEO COUNTY - UST, AB 2185, MOU

Department of Environmental Health
590 Hamilton Street
Redwood City, CA 94063

Phil Duffy
Assistant Director

(415) 363-4305

Local cities that are the implementing agencies for State/Federal Programs.
the County implements the programs for cities that are not listed

(1) Belmont and San Carlos - UST, (the County is responsible for AB 2185)

Southern County Fire Authority
666 Elm Street
San Carlos, CA 94070

Kathy Sinclair
Fire Inspector

(415) 593-8016

SANTA CLARA COUNTY - UST, AB 2185

County Health City Fire departments
2220 Moorpark Avenue
San Jose, CA 95128

Lee Esquibel
Deputy Director of Environmental Health

(408) 299-6930

Cities that are the implementing agencies for State/Federal Programs.
the County implements the programs for cities that are not listed
**For cities in Santa Clara - the County is the implementing agency
for AB 2185, but the fire departments are the Administering Agency**

(1) Campbell - UST

Campbell Fire Department
123 South Union Avenue
Campbell, CA 95008

Michael S. Young
Fire Prevention Officer

(408) 866-2189

(2) Cupertino - UST

Central Fire Department
3071 Driftwood Drive
San Jose, CA 95123

Ken Waldvogel
Fire Inspector, Hazardous Materials

(408) 378-4015

(3) Gilroy - UST

Gilroy Fire Deptment
7070 Chestnut Street
Gilroy, CA 95020

Dave Olds
Hazardous Materials Specialist

(408) 842-5656

(4) Los Gatos - UST

Central Fire Department
3071 Driftwood Drive
San Jose, CA 95123

Ken Waldvogel
Fire Inspector, Hazardous Materials

(408) 378-4015

(5) Milpitas - UST

Office of the Fire Department
455 E. Calaveras Blvd.
Milpitas, CA 95035

Bob Webster
Hazardous Materials Program Coordinator

(408) 942-2381

(6) Morgan Hill - UST

Morgan Hill Fire Department
18300 Old Monterey Road
Morgan Hill, CA 95037

Sharon Kohlmannslehner
Emergency Services Coordinator

(408) 779-7231

(7) Mountain View - UST

Mountain View Fire Dept.
1000 Villa Street
Mountain View, CA 94041

Gary Leinweber
Hazardous Materials Specialist

(415) 966-6378

(8) Palo Alto - UST

Palo Alto Fire Dept.
250 Hamilton Avenue
Palo Alto, CA 94301

Dan Heiser
Fire Inspector

(415) 329-2184

(9) San Jose - UST

City of San Jose
801 No. First Street
San Jose, CA 95110

Charles Wilhelm
Acting Hazardous Materials Program Manager

(408) 277-4659

(10) Santa Clara - UST

Santa Clara Fire Department
777 Benton Street
Santa Clara, CA 95050

Larry Montette, Ph.D.
Chemical Specialist

(408) 984-3084

(11) Sunnyvale - UST

Sunnyvale Department of Public Safety
P.O. Box 60607
Sunnyvale, CA 94088

Ruben Grijalva
Lt. Fire Prevention

(408) 730-7212

SOLANO COUNTY - UST, AB 2185

Solano County Environmental Health
601 Texas Street
Fairfield, CA 94533

Cliff Colvey
Supervising Health Inspector

(707) 429-6401

Cities that are the implementing agencies for State/Federal Programs
the County implements the programs for cities that are not listed

(1) Vallejo - UST, (the County is responsible for AB 2185)

Vallejo Fire Department
703 Curtola Parkway
Vallejo, CA 94590

Robert W. Kinney
Fire Marshall

(707) 648-4565

SONOMA COUNTY - UST, AB 2185

Department of Environmental Health
3313 Chanate Road
Santa Rosa, CA 95401

Jeff Lewin
Supervising Environmental Health Sanitarian

(707) 527-2784

Cities that are the implementing agencies for State/Federal Programs
the County implements the program for cities that are not listed

(1) Healdsburg - UST, AB 2185

Healdsburg Fire Department
238 Center Street
Healdsburg, CA 95448

Bob Taylor
Fire Prevention Officer

(707) 431-3360

(2) Petaluma - AB 2185 (the County is Responsible for UST)

Petaluma Fire Department
11 English Street
Petaluma, CA 94953

Terry Krout
Captain

(707) 778-4390

(3) Santa Rosa - UST, AB 2185

Santa Rosa Fire Department
955 Sonoma Avenue
Santa Rosa, CA 95404

Andrea Mangram
Fire Marshall

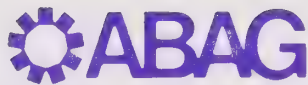
(707) 576-5311

(4) Sonoma - UST, AB 2185

Sonoma Fire Department
32 Patten Street
Sonoma, CA 95476

Steve Marler
Fire Prevention Officer

(707) 996-2102



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

R.J. Brady

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING

A Model to Forecast Hazardous Waste Levels In Bay Area Industries

TECHNICAL MEMORANDUM NO.2

August 1987

Revised November 1987

Overview

The objective of this technical memorandum is to provide a reasonable methodology to forecast output of hazardous wastes associated with economic activity in the Bay Area. The discussion will focus on the following:

- a) estimating economic activity;
- b) developing technological relationships between hazardous waste generation and industry output;
- c) explicit assumptions and deficiencies, and
- d) a worked example.

It is important to state from the outset that in forecasting there is no fool proof methodology. There are, however, some general rules that are followed. First, the methodology should be defensible and objective. That is, a model structure should follow a logical course relating activity and results in a way that experts can generally agree that the structure reflects a reality as close to the real world as possible. Second, assumptions should be plausible. Assumptions serve as the basis for a model structure. In hazardous waste generation, assumptions about the level of economic activity, and technological substitution in the production process which affects waste generation are made. These assumptions should reflect a reasonable relationship between process technology, output and the level of waste being generated. Finally, a good model should be transparent. Since we are dealing with much uncertainty, a technical consensus on a logical model framework and assumptions are essential. Transparency requires that model structure have a framework which can be understood and criticized for the purpose of developing an overall consensus of the reasonableness of the model results.

The Problem

The problem is to develop a model to forecast hazardous waste generation by seventeen categories. ABAG proposes to use this model to forecast hazardous waste in the nine counties that comprise the Bay Area. The target year for the forecast is 2000. The base year is 1985 for economic data. Hazardous waste estimates by industry groups are for the year 1986. Therefore, the base year for the forecast is 1986. That is, the waste data for 1986 is not forecast from 1985, but reflects survey data from the California Department of Health Services (DHS). Forecasts of hazardous waste will be by thirty-two industry sectors in the Bay Area. Growth rates are by industry for each of the counties in the Bay Area. These sectors reflect two-digit and combinations of two-digit Standard Industrial Classification's (SIC). SIC codes were established by the Office of Budget and Management in Washington for the purpose of classifying the outputs of specific firms into an economic framework. That is, a single firm may produce more than one output. Each output is classified by economic activity, as part of the SIC accounting system.

The results of this model will be used to provide planning information on the physical level of hazardous waste that might be generated by industry in each of the nine-county's in the Bay Region for the year 2000.

The data will reflect baseline information. Perturbations on the baseline data could be developed to provide a range estimate, based upon certain technology assumptions about waste generation and efficiency in production. These assumptions would be developed in cooperation with the Task Force.

Estimating Economic Activity

Output by industry in the Bay Area reflects economic assumptions in the latest ABAG projections series, Projections 87. Projections 87 data are county specific, and economic information is by thirty-two industry sectors. Output is expressed in constant 1982 dollars. Since we are forecasting a physical unit (some form of waste), how can dollar values be used to forecast a physical unit? By use of real value growth estimates (constant dollar value sum), inflation is removed from the forecast. There is a one-to-one correspondence in real dollar output and output in physical units. Real dollar output directly reflects increased market share, efficiencies in production and overall growth in demand for the physical unit. In practical terms, it represents the dollar equivalent of a unit change in the physical output. Real dollar output does not change unless the physical level of output changes.

Therefore, real growth in the value of output can be used as a surrogate for physical output change. Real dollar value growth also considers changes in productivity. Why are productivity changes important? One common question that is asked is: "why not simply use employment growth to measure growth in hazardous waste generation?" Let's look at an example to explain why employment growth would not correlate well with hazardous waste growth. In Projections 87, regional electronics employment grows at a slower rate than in the most recent historical past in the Bay Area.

The reason for this derives from the assumption that market conditions that force this industry to become increasingly more capital (technology) intensive in the future. Therefore, between 1986 and 2000, ABAG forecasts a 23% increase in employment in this industry. If we assumed a linear relationship between employment growth and hazardous waste generation, we would assume that this waste would increase by 23%. What is wrong? First, the employment growth does not correlate well with growth in physical output because it does not consider technological change that might increase efficiency in the physical production process. This is a major deficiency of the employment method. At the same time that employment increased in electronics by 23% over the period 1986-2000, electronics dollar output rose by 61%. Why the difference? Output reflects efficiency and technology substitution which tends to reduce the demand for labor. Therefore, the unit output, reflected in constant 1982 dollars, rises per worker over this period.

Developing Output Forecasts by Sector

Industry output data are derived from the a regional input-output model for the nine-county Bay Area (see Brady and Yang). An input-output model is a structure of an economy which identifies the flow of purchases and sales between industries in that economy. The advantage of using a input-output model is that it can provide the direct and indirect impacts in changes in demand by one sector on all sectors. Dollar outputs that will be used to estimate future waste generation by county reflect this effect.

A deficiency in using the existing input-output structure of the Bay Area is that it assumes that long-term trading patterns will not change substantially. In service sectors, this assumption probably holds well. In manufacturing sectors, the assumption weakens. For example, the amount of electronics going into autos is increasing with time. A fixed technical trading structure reflecting a trading pattern at a moment in time would not pick up this change, and therefore would underestimate the potential growth over time in the demand for electronics by the auto industry. It is a problem (unfortunately) that cannot be avoided.

Therefore, the outputs prepared for the Hazardous Waste Management Plans for each county reflects the assumptions and industry trading patterns as found in Projections 87. There are deficiencies found in using this method. But it is far superior to the use of employment change as a measure of waste generation, and it is consistent with the latest regional and county economic growth forecasts.

Developing Technological Relationships between Waste Generation and Industry Output and by County

The use of input-output analysis to forecast energy demand, pollution output and waste generation is not new (see Joun; Kohn, Leontief and Miernyk). Information provided by the Department of Health Services on Hazardous Waste Generation for 1986 is being coded to reflect the SIC structure of the existing industries in the Bay Area by county.

Once the data is coded and sorted by SIC structure, output data by county for the base year will be divided into each waste stream type to develop a technical coefficient. The technical coefficient reflects the amount of waste generated per \$1 of output. Although output data reflects industry activity in 1985, and waste generation data is for 1986, we do not consider this to be a problem because the method of forecasting is simply a ratio method. Second, the exercise is quite literally "a first approximation" to reality that will exist in 2000. There are too many unknown variables to say explicitly that we know what will happen in the year 2000. Given these deficiencies, the method still stands as a realistic and cost-effective technique to forecast waste generation by industry. The equation structure is presented as follows:

Mathematically, this is expressed as:

Let,

H_{iw} = the amount of hazardous waste by type generated by industry (i) in the base year.

X_{ij} = the level of output for industry (i) in the base year.

HT_i = the hazardous waste technical coefficient by each type for industry i.

Now,

$$HT_i = H_{iw} / X_{ij}.$$

The above reflects a simple ratio of output to waste. It assumes a fixed technical relationship between waste generation and output level. That is, it assumes that new technology will not increase efficiency in terms of internalization of waste into the production process. In many cases, this may be a clear oversimplification of reality.

However, as a base case, it will be useful in assessing the trend in waste generation as a function of the output of industries in each county. Professional judgement becomes critical at this stage to provide information on process changes that might affect the level of waste generation in the future.

An advantage of not using an average waste generation coefficient for the region and applying it to counties is that economic activity in selected industries of the same type may vary from county to county. For example, San Francisco has a reasonably large number of workers who work in the SIC industry structure of petroleum refining. Clearly, San Francisco does not have any refineries. By using the data from the Department of Health Services which is county specific, we are able to construct waste generation technical coefficients that reflect the unique economic structure of the industry in each county.

Once the initial condition has been defined, the technical coefficient is multiplied by the forecast year estimate to determine the level of waste by type that would be generated for the base case.

Issues such as changing mix of waste within an industry and overall process level efficiencies should be addressed by the Task Force.

Explicit Assumptions and Deficiencies of Forecasting Method

The assumptions are:

- A. economic growth in the Bay Area counties will follow the assumptions of Projections.87;
- B. the industry trading patterns found in the base year of the input-output model (1982) will not change over the forecast period;
- C. the technical relationship between waste generation by type and the dollar output of the selected industries will not change over the forecast period. We assume no efficiencies for the base case. The technical relationship is linear.

The deficiencies are:

- A. Fixed technical relationships in the trading patterns of industries over the forecast period;
- B. No increased efficiencies which could either internalize waste generation in the production process or reduce its production over time, due to more efficient process technology.

Worked Example

A hypothetical worked example of a baseline forecast of hazardous waste generation is presented. The industry for which an example will be constructed will be printing and publishing (SIC 27). We will call the county, County XYZ.

The Toxic Control Division of the Department of Health Services has collected information from various firms in this SIC category. Staff has aggregated the data of the waste discharge from each firm and has aggregated it into Printing and Publishing for County XYZ. ABAG has the dollar output levels of this industry in County XYZ for 1985 and 2000.

The waste data are:	Acid Solution (PH<=2) with metals	20 tons
	Halogenerated Solvents	5 tons
	Oxygenated Solvents	5 tons
	Hydocarbon Solvents	15 tons
	Waste Oil	30 tons
	Organic Solids	50 tons
	Total	125 tons

The constant dollar output for the base year for County XYZ was estimated at \$250,000,000. ABAG estimates that real growth in output will increase to \$350,000,000 by the year 2000.

First we divide \$250,000,000 into each waste to derive the initial condition between waste and output. Next, the technical coefficient for each waste category is multiplied by the target year output to attain the estimated increase in waste from the economic activity of the specified industry. Table 1 illustrates this process.

Table 1
Waste Generation by Type and Industry 1986 and 2000

Waste Type	Waste (1986) (A)	Waste Coefficient (B)	Waste (2000) (C)
Acid Solution	20 tons	.00000008	28 tons
Halogenerated Solvents	5 tons	.00000002	7 tons
Oxygenerated Solvents	5 tons	.00000002	7 tons
Hydrocarbon Solvents	15 tons	.00000006	21 tons
Waste Oil	30 tons	.00000012	42 tons
Organic Solids	50 tons	.00000020	70 tons
Total	125 tons	.00000050	175 tons

(a1) Output 1985 \$250,000,000

(b2) Output 2000 \$350,000,000

Note: To find (B), divide (a1) by the column vector (A). That is, $(A/a1)$.

To find (C), multiple (b2) by the column vector (B). That is, $(b2 * B)$

Therefore, the waste generation by category and industry is expected to increase by 40% over the forecast period, given the assumptions outlined in this paper.

References

1. Brady, Raymond and Chin Ming Yang, "1982 Input-Output Model and Economic Multipliers For the San Francisco Bay Region," Association of Bay Area Governments, Oakland, CA (June 1986)
2. Joun, R.Y.P. and R.S. Conway, Jr. "Regional Economic-Demographic Forecasting Models: A Case Study of Washington and Hawaii Models," *Socio-Economic Planning Sciences*, 17 (1983) pp. 345-353.
3. Kohn, R. "Input-Output Analysis and Air Pollution Control," in E.S. Mills (ed.), *Economic Analysis of Environmental Problems*. New York, 1975.
4. Miernyk, W.H. and J.T. Sears. *Air Pollution Abatement and Regional Economic Development*. Lexington, Mass.: Lexington Books, 1974.



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

S. L. Tu, T. A. Bursztynsky

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING

DEFINING HAZARDOUS WASTES

TECHNICAL MEMORANDUM NO.3

August 1987

COMMON DEFINITIONS OF TERMS RELATED TO HAZARDOUS WASTE

The objective of this technical memorandum is to define the major terms related to hazardous waste management. In formulating the regional plan, there is a need for consistency in nomenclature. With multiple concurrent county planning efforts producing plans to be incorporated into the regional plan, it is essential that there be a common basis of language and definition.

Since the hazardous waste planning effort is mandated by State law and directed by the Department of Health Services (DHS), we will start with that agency's definitions. The following definitions are obtained from the Guidelines for the Preparation of Hazardous Waste Management Plans, June 1987.

- hazardous material:

a substance or combination of substances which, because of its quantity, concentration, physical, chemical, or infectious characteristics, may either:

(1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of, or otherwise managed.

Unless expressly provided otherwise, the term "hazardous material" shall be understood to also include extremely hazardous material.

(22 CAC, Section 66084)

- hazardous substance:

This term means :

(1) any substance designated pursuant to Section 1321(b)(2)(A) of Title 33 of the United State Code.

(2) any element, compound, mixture, solution, or substance designated pursuant to Section 102 of the federal act (42 U.S.C. 9602)

(3) any hazardous waste having the characteristics identified under or listed pursuant to Section 6921 of Title 42 of the U.S. Code, but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by act of Congress.

(4) any toxic pollutants listed under Section 1317 (a) of Title 33 of the U.S. Code.

(5) any imminently hazardous chemical substance or mixture with respect to which the administration of the U.S. EPA has taken action pursuant to Section 2606 of Title 15 of the U.S. Code.

(6) any hazardous waste or extremely hazardous waste as defined by Section 25117 and 25115, respectively, unless expressly excluded. (Health and Safety Code Section 25316)

- hazardous waste:

a waste, or combination of wastes, which because of its quantity, concentration, physical, chemical, or infectious characteristics, may either:

(1) cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or

(2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported or disposed of or otherwise managed.

Unless expressly provided otherwise, the term "hazardous waste" shall be understood to also include extremely hazardous waste. (Section 25117, health and Safety Code)

- hazardous waste facilities:

all contiguous land and structures, other appurtenance, and improvements on the land, use for handling, treating, storing, or disposing of hazardous wastes (22 CAC Section 66096)

- hazardous waste management:

the systematic control of the collection, sources separation, storage, transportation, processing, treatment, recovery, and disposal of hazardous wastes (22 CAC Section 66130)

- hazardous waste element:

that portion of a County Solid Waste Management Plan which addresses hazardous waste management.

- extremely hazardous waste:

a waste, or combination of wastes, which has been shown through experience or testing to pose an extremely hazard to the public health because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment, when improperly treated, stored, transported or disposed of or otherwise managed.

- restricted hazardous waste:

a liquid hazardous waste containing either free cyanides at concentration greater than or equal to 1,000 mg/l, Arsenic of 500 mg/l, Cadmium of 100 mg/l, Chromium at 500 mg/l, Lead of 500 mg/l, mercury of 20 mg/l, Nickel of 134 mg/l, Selenium of 100 mg/l, Thallium of 130 mg/l, or PCB of 50 mg/l, or having a pH less than or equal to 2; or any hazardous waste containing halogenated organic compounds in total concentration greater than or equal to 1,000 mg/kg. (Health and Safety Code Sec. 25122.7)

- special wastes:

a waste which is a hazardous wastes only because it contains an inorganic substance or substances which cause it to pose a chronic toxicity hazard to human health or the environment and which meets all of the criteria and requirements of Section 66742 and has been classified as a Special Waste pursuant to Section 66744. (22 CAC Section 66191)

A noninclusive list of special wastes is provided in Section 66740 in the attachment.

- toxic:

capable of producing injury, illness, or damage to humans, domestic livestock, or wildlife through ingestion, inhalation, or absorption through any body surface.

- treatment:

any method, techniques, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous or less hazardous; safer to transport, store, dispose of; or amenable for recovery, amenable for storage or reduce in volume. (22 CAC Section 66216)

A waste that meets the definition of hazardous or extremely hazardous waste presented in the Health and Safety Code or satisfies any of the criteria of hazardous waste, shall be considered a hazardous (or extremely hazardous) waste whether or not the waste is cited by name.

Major additional definitions of hazardous wastes, substances, and materials are found in Federal regulations. Those definitions are included as Attachment A. It should be noted that most of the hazardous wastes on the list are process residues, emission control dusts, or wastewater treatment sludges. It is also of importance to note that not all materials are hazardous when recycled. EPA breaks down the recycling activities according to the type of secondary material (which are listed in the regulations) involved.

CHEMICAL LISTINGS

Obviously, these definitions listed above are complex, legalistic, and provide inadequate guidance in the practical world. More useful to the hazardous wastes planners would be a list of specific chemicals which are considered hazardous when disposed of as wastes.

The current DHS official list of hazardous materials has approximately 750 chemicals. This list is included as Attachment B. The Federal government also provides lists of hazardous substances, most of which would be considered hazardous as wastes. Attachment C shows a consolidated list of chemicals from the Federal Environmental Protection Agency (EPA).

It should be noted from Attachment C that there are at least 50,000 other chemicals, not specified in the consolidated list, that are subject to the reporting requirements in Sections 311 and 312 of SARA (Superfund Amendments and Reauthorization Act, 1986) Title III. These hazardous chemicals, for which material safety data sheets (MSDS) are required, are officially identified as hazardous by the Federal government.

CRITERIA FOR HAZARDOUS WASTE

Clearly, new chemicals are being discovered and created every day, many of them hazardous. It is therefore never possible and realistic to compile a complete list of them. An alternative is to compile a simple set of criteria for hazardous materials against which chemicals are compared. The following criteria were obtained from the California Administrative Code (CAC) Article 11, Section 66693 through 66720.

Any waste which is hazardous pursuant to any of the criteria set forth in Article 11 of Title 22 is a hazardous waste. Article 11 and its provisions are attached, and include the details of the following:

- . Toxicity criteria (see Attachment D: CAC Title 22, Article 11, Section 66696)
- . Persistent and bioaccumulative toxic substance (CAC Title 22, Article 11, Sec. 66699)
- . Ignitability criteria (CAC Title 22, Article 11, Sec. 66702)
- . Reactivity criteria (CAC Title 22, Article 11, Sec. 66705)
- . Corrosivity criteria (CAC Title 22, Article 11, Sec. 66708)
- . Extremely hazardous waste criteria (CAC Title 22, Article 11, Sec. 66720)

The criteria below are condensed for easier reading. Eliminated were mostly the detailed specifications on how tests are conducted. The reader may refer to relevant sections of the CAC for that detailed information.

Condensed Criteria

. Toxicity criteria:

A waste, or a material is toxic and hazardous if it:

- (1) has an acute oral LD50 less than 5,000 mg/kg; or
- (2) has an acute dermal LD50 less than 4,300 mg/kg; or
- (3) has an acute inhalation LC50 less than 10,000 ppm as a gas or vapor; or
- (4) has an acute aquatic 96 hours LC50 less than 500 mg/l when measured in soft water; or
- (5) contains any of the following substances at a single or combined concentration equal to or exceeding 0.001 % by weight:
2-AAF, Acrylonitrile, 4-Aminodiphenyl, Benzidine and its salts, BCME, Methyl chloromethyl ether, DBCP, DCB, DAB, EL, 1-NA, 2-NA, 4-NBP, DMN, BPL, VCM; or
- (6) has been shown through experience or testing to pose a hazard to human health or environment because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment; or
- (7) is listed in 40 CFR261 (codified July 1, 1982) as a hazardous waste.

Exception: A waste containing one or more materials which are toxic according to the criterion of the same section may be classified as non-hazardous if the waste is not hazardous by any other criterion of the same article and its head space vapor contains no such toxic materials in concentration exceeding their respective eight-hour inhalation LC50 or their LC/Lo. Also, they may be classified as non-hazardous if the waste is not hazardous by any other criterion of the same article and the calculated oral LD50 of the waste mixture is greater than 5,000 mg/kg and the calculated dermal LD50 is greater than 4,300 mg/kg.
(see Attachment D: CAC Title 22, Article 11, Section 66696)

. Persistent and bioaccumulative toxic substance:

- (a) Any waste is a hazardous waste which contains a substance listed in subsections (b) or (c) of this section: (see Attachment D: CAC Title 22, Article 11, Section 66699)

66699. Persistent and Bioaccumulative Toxic Substance.

(a) Any waste is a hazardous waste which contains a substance listed in subsections (b) or (c) of this section:

- (1) at a concentration in milligrams per liter as determined pursuant to Section 66700 which exceeds its listed soluble threshold limit concentration, or
- (2) at a concentration in milligrams per kilogram in the waste which exceeds its listed total threshold limit concentration.

(b) List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values.

<i>Substance</i>	<i>STLC</i> <i>mg/l</i>	<i>TTLC</i> <i>Wet-Weight</i> <i>mg/kg</i>
Antimony and/or antimony compounds.....	15	500
Arsenic and/or arsenic compounds	5.0	500
Asbestos	-	1.0
		(as percent)
Barium and/or barium compounds (excluding barite)	100	10,000††
Beryllium and/or beryllium compounds.....	0.75	75
Cadmium and/or cadmium compounds	1.0	100
Chromium (VI) compounds	5	500
Chromium and/or chromium (III) compounds	560	2,500
Cobalt and/or cobalt compounds	80	8,000
Copper and/or copper compounds	25	2,500
Fluoride salts	180	18,000
Lead and/or lead compounds	5.0	1,000
Mercury and/or mercury compounds	0.2	20
Molybdenum and/or molybdenum compounds	350	3,500
Nickel and/or nickel compounds	20	2,000
Selenium and/or selenium compounds.....	1.0	100
Silver and/or silver compounds	5	500
Thallium and/or thallium compounds.....	7.0	700
Vanadium and/or vanadium compounds	24	2,400
Zinc and/or zinc compounds.....	250	5,000

* STLC and TTLC values are calculated on the concentrations of the elements, not the compounds.

† In the case of asbestos and elemental metals, applies only if they are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

†† Excluding barium sulfate.

(c) List of Organic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values.

<i>Substance</i>	<i>STLC</i> <i>mg/l</i>	<i>TTLC</i> <i>Wet Weight</i> <i>mg/kg</i>
Aldrin	0.14	1.4
Chlordan	0.25	2.5
DDT, DDE, DDD	0.1	1.0
2,4-Dichlorophenoxyacetic acid	10	100
Dieldrin	0.8	8.0
Dioxin (2,3,7,8-TCDD)	0.001	0.01
Endrin	0.02	0.2
Heptachlor	0.47	4.7
Kepone	2.1	21
Lead compounds, organic	-	13
Lindane	0.4	4.0
Methoxychlor	10	100
Mirex	2.1	21
Pentachlorophenol	1.7	17
Polychlorinated biphenyls (PCBs)	5.0	50
Toxaphene	0.5	5
Trichloroethylene	204	2,040
2,4,5-Trichlorophenoxypropionic acid.....	1.0	10

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Editorial correction filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41).

. Ignitability criteria :

A waste, or a material, is ignitable and hazardous if it:

- (1) is a liquid, other than an aqueous solution containing less than 24% alcohol by volume, and has a flash point less than 60 degree C (140 degree F); or
 - (2) is not a liquid, and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard; or
 - (3) is a flammable compressed gas as defined in 49 CFR 173.300; or
 - (4) is an oxidizer as defined in 49 CFR 173.151.
- (see Attachment D: CAC Title 22, Article 11, Sec. 66702)

. Reactivity criteria:

A waste, or a material is reactive and hazardous if it:

- (1) is normally unstable and readily undergoes violent change without detonating; or
 - (2) reacts violently with water; or
 - (3) forms potentially explosive mixtures with water; or
 - (4) generates toxic gases, vapors, or fumes, when mixed with water, in a quantity sufficient to present a danger to human health or the environment; or
 - (5) is a cyanide or sulfide bearing waste which, when exposed to PH conditions between 2 and 12.5, generates toxic gases, vapors, or fumes, when mixed with water, in a quantity sufficient to present a danger to human health or the environment; or
 - (6) is capable of detonation or explosive reaction if it is subject to a strong initiating source or heated under confinement; or
 - (7) is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
 - (8) is a forbidden explosive.
- (see Attachment D: CAC Title 22, Article 11, Sec. 66705)

. Corrosivity criteria:

A waste, or material is corrosive and hazardous if it:

- (1) is aqueous and has a PH less than or equal to 2 or greater or equal to 12.5, or its mixture with an equivalent weight of water produces a solution having a PH less than or equal to 2 or greater or equal to 12.5; or

(2) is a liquid, or when mixed with an equivalent weight of water produces a liquid, and corrodes steel at a rate greater than 6.35 mm (0.25 in.) per year.

(see Attachment D: CAC Title 22, Article 11, Sec. 66708)

. Extremely hazardous waste criteria:

A waste, or a material is extremely hazardous if it:

- (1) has an acute oral LD50 less than or equal to 50 mg/kg; or
- (2) has an acute dermal LD50 less than or equal to 43 mg/kg; or
- (3) has an acute inhalation LC50 less than or equal to 100 ppm as a gas or vapor; or
- (4) contains any of the substances listed in Section 66696 (a)
- (5) at a single or combined concentration equal to or exceeding 0.1 % by weight; or
- (5) has been shown through experience or testing to pose an extremely hazard to the public health because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment; or
- (6) is water-reactive.

(see Attachment D: CAC Title 22, Article 11, Sec. 66720)

For any county agency dealing with hazardous waste management, judging whether a chemical meets the criteria listed above can be a practical issue of major concern. Determining whether a new waste is hazardous can cost money, requires experienced staff and can have significant legal consequences. Where does a county obtain such judgements (decisions) and how during the planning process should each county get its un-categorized wastes assigned as hazardous or non-hazardous? There may be several options for the county to consider.

First, a county can compare chemicals against the published lists provided by DHS and EPA. This may not be a fool-proof approach since the lists are not up-dated as rapidly as new chemicals are introduced or classified as hazardous. Second, the county can run analyses on materials disposed as wastes, following the technical details listed in the CAC, to decide whether the material falls into the criteria. Finally, the county can obtain judgements from recognized authorities such as DHS's Toxic Substances Control Division or EPA as to the toxicity of particular waste.

Such judgements, confirming a waste as hazardous, could impose increased dollar costs upon any industrial waste generator. Therefore, the process, and its findings, clearly have financial, legal, and administrative implications to both the government agencies and private industries as well.

SEVENTEEN WASTE GROUPS LISTED BY CALIFORNIA WASTE CATEGORIES

It is necessary to group the various types of waste into related, useful, and logical unit as a first step in an hazardous waste generation analysis. The DHS has, in order to simplify the current hazardous waste classification system (as identified in the back of the uniform hazardous waste management manifest), selected 17 waste groups. The following list, provided by the DHS, converted the 80 manifest California waste categories into those 17 broad waste groups. It is recommended by the DHS that, for simplicity and consistency, all hazardous waste generation data in the CHWMPs be organized by using these 17 waste groups. They represent an effort by the DHS to compromise between detail and convenience. The 17 waste groups were selected because they closely represent the DHS's actual level of knowledge of the hazardous waste stream composition in California.

Organic:

- Liquids:

- . waste oil:
 - waste oil and mixed oil
 - unspecified oil containing waste
- . halogenated solvents:
 - halogenated solvents
 - liquids with halogenated organics comp. > 1000 mg/l
- . non-halogenated solvents:
 - oxygenated solvents
 - hydrocarbon solvents
 - unspecified solvents mixtures
- . organic liquids:
 - aqueous with total organics > 10%
 - aqueous with total organics < 10%
 - organics (nonsolvents) liquids with halogen
 - organic liquids with metals
 - unexpected organic liquid mixtures
- . pesticides:
 - pesticide rinse water
 - pesticides and pesticide production & waste PCBs
- . dioxins:
 - PCBs
 - liquids with PCBs > 50 mg/l
 - Waste potentially containing dioxins

- Sludges and Solids:

- . oily sludges:
 - oil/water separation sludge
 - other organic solids
 - tetraethyl lead sludge
- . halogenated organic sludges & solids:
 - still bottoms with halogenated organics
 - organic solids with halogens
 - degreasing sludge
 - solids with halogenated org. comp. > 1000 mg/kg
- . non-halogenated organic sludges & solids:
 - tank bottom waste
 - other still bottom waste
 - sewage sludge
 - paper sludge/pulp
 - unspecified sludge waste
 - fly ash, bottom ash and retort ash
- . dye and paint sludges and resins:
 - organic monomer waste
 - polymetric resin waste
 - adhesive
 - latex waste
 - paint sludge

Non-Organic:

Liquids:

- . metal-containing liquids:
 - acid with metals
 - alkaline with metals
 - aqueous with metals
 - liquids with arsenic > 500 mg/l
 - liquids with cadmium > 100 mg/l
 - liquids with chromium > 500 mg/l
 - liquids with lead > 500 mg/l
 - liquids with mercury > 20 mg/l
 - liquids with nickel > 134 mg/l
 - liquids with selenium > 100 mg/l
 - liquids with thallium > 130 mg/l
- . cyanide & metal liquids:
 - liquids with cyanides > 1000 mg/l

- . non-metallic inorganic liquids:
 - acid without metals
 - unspecified acid
 - alkaline without metals
 - unspecified alkaline
 - aqueous with reactive anions
 - unspecified aqueous solution
 - liquids with Ph value < 2

- Sludges and Solids:

- . metal-containing sludges:
 - metal sludge
- . non-metallic inorganic sludges:
 - alum and gypsum sludge
 - lime sludge
 - phosphate sludge
 - sulfur sludge
 - drilling mud contaminated
- . soil:
 - contaminated soil
- . miscellaneous wastes:
 - off-spec, aged, or surplus inorganics
 - asbestos-containing waste
 - fluid catalytic cracker waste
 - other spent catalyst
 - metal dust
 - other inorganic solid waste
 - pharmaceutical waste
 - biological waste other than sewage sludge
 - off-spec, aged, or surplus organics
 - empty pesticide containers > 30 gal.
 - other empty container > 30 gal.
 - empty container < 30 gal.
 - chemical toilet waste
 - photochemicals/photoprocessing waste
 - lab. waste chemical
 - detergent and soap
 - gas scrubber waste
 - baghouse waste
 - household waste

ATTACHMENT A

HAZARDOUS MATERIALS DEFINITIONS

IN

RESOURCE CONSERVATION AND RECOVERY ACT

(RCRA), 1976, SUBTITLE C

Cited from the Chemical Substances Control

published by

the Bureau of National Affairs, Inc., 1986

APPLICATION OF POLICY

When Are Solid Wastes Subject to Hazardous Waste Regulations?

Solid wastes are regulated as hazardous (under RCRA Subtitle C) if they are:

- Disposed of, burned or incinerated, or accumulated, stored, or treated (but not recycled) before being disposed of or burned.

- Recycled, or accumulated, stored, or treated before recycling. Recycling activities include:

- **Using the waste in a manner constituting disposal** (placing it on the land or using it to produce products that are placed on the land, *excluding* those that are ordinarily placed on the land as a matter of use).

- **Burning the waste to recover energy or to produce a fuel**, (*excluding* commercial products that are fuels).

- **Reclaiming the waste** to recover or regenerate materials (certain wastes only).

- **Accumulating the waste speculatively** before recycling (unless 75 percent of it is recycled during a one-year period).

- Inherently waste-like. These wastes contain toxic constituents (see p. 241:631) not ordinarily found in raw materials or products (except in small concentrations) and pose a substantial risk to human health and the environment. These wastes are ordinarily disposed of, burned, or incinerated but not recycled for use or reuse since they are toxic.

In order to determine if a recycled material is hazardous, however, one must know what the material is in addition to how it is being recycled, according to EPA.

Which Materials Are Hazardous When Recycled?

EPA breaks down the recycling activities according to the type of secondary material involved. All of the secondary

materials listed below are considered to be hazardous when recycled (as described above), unless otherwise stated:

- Spent materials that are unfit for further use without being regenerated, reclaimed, or reprocessed. Spent solvents, spent activated carbon, spent catalysts, and spent acids are examples.

- Sludges defined as air and wastewater treatment residues, or other residues from pollution control operations. (**Note:** only those sludges listed at pp. 241:551 and 561 are hazardous when reclaimed.)

- By-products or non-primary products that are generated incidentally and that are not intended for any end use. By-products cover a broad range of materials that are neither spent materials nor sludges. (**Note:** only those by-products listed at pp. 241:551 and 561 are hazardous when reclaimed.)

- Commercial chemical products such as non-specification variants and spill and container residues (see listings at pp. 241:551 and 561). (**Note:** Since these wastes are not ordinarily hazardous when recycled, they will be regulated only when they are used in a manner constituting disposal or when they are burned for energy recovery, assuming they are not pesticides nor commercial fuels.)

- Scrap metal such as bits and pieces of metal that are discarded after commercial use — scrap automobile, scrap radiator, and other post-consumer scrap — and obsolete scrap, such as scrap turnings and fines. (**Note:** These wastes are exempt for the time being.)

- Inherently waste-like materials (see above) are hazardous regardless of how they are recycled. Examples include hazardous wastes F020, F021, F022, F023, F026, and F028, listed beginning at p. 241:541.

only household wastes and non-hazardous solid wastes from commercial and industrial establishments are also exempt. Facility owners must set up some procedure to assure that the facility does not take in any hazardous wastes.

Reclaimed secondary materials —

Secondary materials that are reclaimed and returned to the original process or processes in which they were generated where they are reused in the production process are exempt provided:

- Only tank storage is used.
 - The entire process is closed by being entirely connected with pipes or other comparable enclosed means of conveyance through completion of reclamation.
 - Reclamation does not involve controlled flame combustion (such as occurs in boilers, industrial furnaces, or incinerators).
 - The secondary materials are never accumulated in storage tanks for more than 12 months without being reclaimed.
 - The reclaimed material is not used to produce a fuel, or used to produce products that are used in a manner constituting disposal.
- Non-solid wastes —**EPA does not classify the following wastes as solid wastes, therefore they are excluded:
- Industrial wastewater discharges (point source) which are regulated under the CWA.
 - Source, special nuclear or byproduct material.
 - Materials subject to in-situ mining techniques, which are not extracted from the ground.
 - Domestic sewage and mixtures of domestic sewage with other wastes that pass through a sewer to a publicly-owned treatment works.
 - Irrigation return flows.
 - Pulping liquors that are reclaimed in a recovery furnace and then reused in

the pulping process, unless accumulated speculatively.

- Spent sulfuric acid used to produce virgin sulfuric acid, unless it is accumulated speculatively.

Samples Exemption

Samples collected for monitoring and testing the composition and characteristics of solid waste, air, soil, or water are exempt from regulation under RCRA.

Samples are excluded from the RCRA generator and transporter requirements when shipped from the generator or sample collector to a laboratory or back from the laboratory to the sample collector. However, certain minimal conditions must be met. Shipments must comply with applicable Department of Transportation or U.S. Postal Service rules. If the sample collector finds that DOT or USPS rules do not apply, the following information must accompany the shipment:

- The sample collector's name, mailing address, and telephone number.
- The laboratory's name, mailing address, and telephone number.
- The quantity of the sample.
- The date of the shipment.
- A description of the sample.

In addition, the sample must be packaged so that it does not spill, leak, or vaporize during shipment.

RCRA storage rules need not be followed when samples are being stored by the following groups: a sample collector before transport to a laboratory for testing; a laboratory before testing; or a laboratory after testing but before return to the sample collector. Laboratories also may store samples temporarily after testing for such purposes as awaiting the outcome of a court decision or enforcement action where further testing may be necessary.

EPA notes that this exemption from the storage rules lasts only until a laboratory has completed its work and has no reason to continue storing the

sample. EPA does not exempt laboratory wastes—including samples that are discarded after analysis is complete—from RCRA regulation.

Laboratories and others that handle samples also do not have to notify the agency of RCRA hazardous waste activity with regard to the samples.

Which Materials Are Not Hazardous When Recycled?

Not all materials are hazardous when recycled. For example, an unlisted by-product that is reclaimed is not defined as a hazardous waste. However, the same by-product is considered a waste if it is placed on the land directly or used to make a product that is put on the land for beneficial use, burned as a fuel or used to make a fuel, or accumulated speculatively; or disposed of or incinerated rather than recycled.

In addition, EPA does not consider the following activities to involve waste management as they are like ordinary production operations and the secondary materials are functioning as raw materials:

- Materials used or reused as ingredients or feedstocks in an industrial process to make a product, provided the materials are not reclaimed.

- Materials used or reused directly as effective substitutes for commercial products.

- Materials returned to the original process from which they are generated, without first being reclaimed, as long as they are returned as a substitute for raw material feedstock, and the process uses raw materials as principal feedstocks (for example: close-looped production processes).

When Is A Solid Waste Hazardous?

In order to find out if a solid waste is classified as hazardous, check to see if it is included in EPA's hazardous waste listings (see pp. 241: 541, 551, and 561); it meets any of the hazardous characteristics, i.e., ignitability, corrosivity, reactivity, or EP toxicity; it is a mixture of a solid waste and a hazardous waste which is listed; or if testing confirms that the waste is hazardous.

Also considered hazardous is any solid waste generated from the treatment, storage, or disposal of a hazardous waste, including any sludge, spill resi-

due, ash, emission control dust or leachate (not including precipitation run-off).

What Is Not A Hazardous Waste?

A solid waste that does not exhibit any hazardous characteristics or that does but has been delisted (see chapter at p. 241:251) is not considered to be hazardous.

The following wastes are not hazardous even though they are generated from the treatment, storage, or disposal of a hazardous waste (unless they exhibit a hazardous characteristic):

- Waste pickle liquor sludge generated by lime stabilization of spent pickle liquor from the iron and steel industry (SIC Codes 331 and 332).

- Wastes from burning any of the following materials: scrap metal; oil reclaimed from hazardous waste resulting from normal petroleum management and transportation practices that will be further refined; coke and coal tar containing K087 (decanter tank tar sludge from coking operations) hazardous waste from iron and steel production processes; and hazardous waste fuel produced from oil-bearing hazardous wastes (or oil reclaimed from hazardous wastes) from petroleum management or transportation practices where such hazardous wastes are reintroduced into a non-distillation process or one that does not produce products from crude oil, as long as the resulting fuel meets the specification levels found in the chapter beginning at p. 241:701 and no other hazardous wastes are used to produce the fuel.

When petroleum coke is produced from hazardous wastes generated from the same facility, it is not considered hazardous if the wastes are oil-containing refinery wastes. Such wastes are considered hazardous only if the wastes in the resulting coke product exceed one or more hazardous waste characteristics.

Other wastes that are not regulated are listed under "exemptions" at the end of this chapter.

Hazardous Waste Listing

Most of the hazardous wastes on the list are process residues, emission control dusts, or wastewater treatment sludges.

The following hazard codes indicate EPA's basis for listing the classes or types of wastes:

- Ignitable Waste (I)
- Corrosive Waste (C)
- Reactive Waste (R)
- EP Toxic Waste (E)
- Acute Hazardous Waste (H)
- Toxic Waste (T)

EPA assigned an EPA Hazardous Waste Number (the number preceding the name of the waste) to each hazardous waste on the list. The number is significant for meeting notification and some recordkeeping and reporting requirements.

The list is broken down into three categories: non-specific sources, specific sources, and discarded commercial chemical products.

Hazardous wastes from non-specific and specific sources are listed beginning at p. 241:541. Discarded commercial chemical products are listed beginning at p. 241:551 and 241:561.

A list identifying what constituent(s) caused EPA to define a waste as EP Toxic (E) or toxic waste (T) in the list at p. 241:541 appears beginning at p. 241:583.

EPA also has a list of constituents any one of which if present in a waste could render that waste hazardous and therefore eligible to be included on the agency's hazardous waste list. The list appears beginning at p. 241:631.

Discarded Chemical Products

Discarded commercial chemical products or manufacturing chemical intermediates classified as either acute hazardous wastes (H), or toxic wastes (T)

and are subject to the small quantity generator exclusion (see p. 241:971). A list of these appears beginning at p. 241:551 and 561, respectively. EPA hazardous waste numbers also are listed.

Discarded materials are considered hazardous if they include:

- Any commercial chemical product or manufacturing chemical intermediate with a generic name listed.

- Any off-specification commercial chemical product or manufacturing chemical intermediate that would have a generic name listed if it met specifications.

- Any residue of a commercial chemical product or manufacturing chemical intermediate having a generic name listed that remains in a container or an inner liner from a container unless the container is empty (see "Exemptions" below). **NOTE:** EPA considers a residue to be intended for discard, and thus a hazardous waste unless it is being beneficially used or reused, legitimately recycled or reclaimed; or being accumulated, stored, transported, or treated prior to such activities. For example, residue remaining in a container that is used to hold the same product is considered legitimate reuse. An example of a discarded product would be where a drum is sent to be reconditioned and the reconditioner discards the residue.

- Any residue or contaminated soil, water, or other debris from cleaning up a spilled commercial chemical product or manufacturing chemical intermediate with a generic name listed.

- Any residue or contaminated soil, water, or debris from cleaning up a spill of any off-specification chemical product or manufacturing chemical intermediate, which would have a generic name listed if it met specifications.

The discarded commercial products listed beginning at pp. 241:551 and 561 are considered hazardous wastes when they are discarded or for discard; burned

for energy recovery or as a fuel; used to produce fuels or distributed for such use; or applied to the land or mixed with waste oil, used oil, or other material and applied to the land (i.e., as a dust suppressant).

Characteristics

The four characteristics for identifying a hazardous waste — ignitability, corrosivity, reactivity, toxicity — are explained below. Any waste that exhibits any of these characteristics is considered to be a hazardous waste, whether or not it is on the list and is assigned an EPA hazardous waste number. This number must be used in complying with notification requirements and certain recordkeeping and reporting requirements (see chapter at p. 221:1501).

Ignitability: This characteristic identifies a waste that may cause a fire during routine waste disposal and storage conditions. There are several ways to identify ignitable wastes, depending on whether the waste is liquid, solid, or compressed gas.

A waste is ignitable if:

- It is a liquid other than an aqueous solution containing less than 24 percent alcohol by volume that has a flash point of 140 degrees Fahrenheit (60 C) or less.

- It is not a liquid and is capable of causing a fire at standard temperature or pressure through friction, absorption of moisture, or spontaneous chemical changes.

When ignited, a waste of this type burns so vigorously and persistently that it creates a hazard.

- It is a compressed gas classified as flammable by the Department of Transportation. DOT's definition of flammable may be found in the chapter beginning at p. 231:1071.

- It is an oxidizer according to DOT's rules. Oxidizer is defined in the chapter beginning at p. 231:1111.

Solid wastes that exhibit these characteristics but are not listed have the EPA Hazardous Waste Number of D001.

Corrosivity: A solid waste is corrosive if it is aqueous and has a pH of less than or equal to two or greater than or equal to 12.5. Liquid waste is corrosive if it can corrode steel at a rate greater than 0.250 inches per year at a test temperature of 130 degrees Fahrenheit (55 C).

A solid waste that exhibits corrosive characteristics but is not listed has the EPA Hazardous Waste Number of D002.

Reactivity: A solid waste is reactive if it does any of the following:

- Readily undergoes violent change without detonating and normally is unstable.

- Reacts violently with water.

- Forms potentially explosive mixtures with water.

- When mixed with water, generates sufficient toxic gases, vapors, or fumes to pose a danger to human health or the environment.

- Contains cyanide or sulfide-bearing waste that, when exposed to pH conditions between two and 12.5, can generate sufficient toxic gases, vapors, or fumes to pose a danger to human health or the environment.

- Is capable of detonation or explosive decomposition or reaction at standard temperature and pressure.

- Is a forbidden explosive or a Class A or Class B explosive according to DOT's rules. Definitions may be found in the chapter beginning at p. 231:1021.

A solid waste that exhibits the characteristics of reactivity and is not listed, has the EPA Hazardous Waste Number of D003.

Toxicity: A solid waste has the characteristic of toxicity if the Extraction Procedure (EP) shows that the extract from a representative sample of the waste has any of the contaminants list-

ed in the table below at a concentration equal to or greater than that shown:

**Maximum Concentration of
Contaminants for Characteristic
of EP Toxicity**

EPA hazardous waste number	Contaminant	Maximum concentration (milligrams per liter)
D004.....	Arsenic.....	5.0
D005.....	Barium.....	100.0
D006.....	Cadmium.....	1.0
D007.....	Chromium.....	5.0
D008.....	Lead.....	5.0
D009.....	Mercury.....	0.2
D010.....	Selenium.....	1.0
D011.....	Silver.....	5.0
D012.....	Endrin (1,2,3,4,10,10- hexachloro-1,7-epoxy- 1,4,4a,5,6,7,8,8a- octahydro-1,4-endo, endo- 5,8-dimethano naphthalene.	0.02
D013.....	Lindane (1,2,3,4,5,6- hexachlorocyclohexane, gamma isomer.	0.4
D014.....	Methoxychlor (1,1,1- Trichloro-2,2-bis [p- methoxyphenyl]ethane).	10.0
D015.....	Toxaphene (C ₁₀ H ₁₆ Cl ₈ , Technical chlorinated camphene, 67-69 percent chlorine).	0.5
D016.....	2,4-D,(2,4- Dichlorophenoxyacetic acid)	10.0
D017.....	2,4,5-TP Silvex (2,4,5- Trichlorophenoxypropionic acid)	1.0

If the waste contains less than 0.5 percent filterable solids, the waste itself is considered to be the extract after filtering.

Testing

There are three methods for testing a solid waste to determine if it is hazardous: the representative sampling methods, the extraction procedure (EP), and the chemical analysis test methods.

Representative Sampling Methods:

The methods and equipment used to sample waste materials vary with the form and consistency of the waste materials being sampled.

Samples collected using the sampling protocols listed below, for sampling waste with properties similar to the

indicated materials, will be considered by the Agency to be representative of the waste.

Extremely viscous liquid — ASTM Standard D140-70, Crushed or powdered material — ASTM Standard D346-75, Soil or rock-like material — ASTM Standard D420-69, Soil-like material — ASTM Standard D1452-65, Fly Ash-like material — ASTM Standard D2234-76 [ASTM Standards are available from ASTM, 1916 Race St., Philadelphia, PA 19103].

Containerized liquid wastes — “COLI-WASA” described in “Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods,” U.S. Environmental Protection Agency, Office of Solid Waste, Washington, D.C. 20460. [Copies may be obtained from Solid Waste Information, U.S. Environmental Protection Agency, 26 W. St. Clair St., Cincinnati, Ohio 45268].

Liquid waste in pits, ponds, lagoons, and similar reservoirs. — “Pond Sampler” described in “Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods.”

An explanation of these methods may be found in “Samplers and Sampling Procedures for Hazardous Waste Streams” EPA 600/2-80-018, January 1980, which is available from Solid Waste Information, U.S. Environmental Protection Agency, 26 West St. Clair Street, Cincinnati, Ohio 45268.

Extraction Procedure (EP): This process requires testing of a representative sample of solid waste subjected to an acetic acid leaching medium (5 pH). If an extract reveals contaminants in concentrations of 100 times or more than the level specified in the National Interim Primary Drinking Water Standards, the waste is hazardous.

Guidance on the EP may be found in “Test Methods for the Evaluation of Solid Waste, Physical/Chemical Meth-

ods," also available from the Cincinnati office.

Chemical Analysis Test Methods: Tables 1, 2, and 3 on pp. 241:603, 605, and 607 specify the procedures described in "Test Methods for Evaluating Solid Waste" (SW-846) (Available from EPA's Cincinnati office), and are to be used to determine whether a waste sample contains a toxic constituent listed beginning on pp. 241:583 or 241:631.

Table 1 identifies organic constituents from either one of those lists, along with their approved measurement method. Table 2 identifies the corresponding methods for inorganic species. Table 3 summarizes the contents of SW-846 and supplies specific section and method numbers for sampling and analysis methods.

Consult the above-mentioned book (SW-846) for additional guidance on which of the approved methods should be used for a specific waste analysis situation.

Exemptions

Persons who generate, transport, treat, store, or dispose of hazardous wastes may be exempt from RCRA requirements depending on the amount of hazardous waste generated, special circumstances under which the waste is handled, and the type of waste generated. Generators of small quantities of hazardous waste, for example, are exempt from certain RCRA requirements, see chapter at p. 241:971. Waste samples also are exempt from the RCRA rules. For further information on this exemption see the section below.

Wastewaters/hazardous waste mixtures — Certain mixtures of non-hazardous wastewaters with small amounts of listed hazardous wastes that are discharged into a plant's wastewater treatment unit are exempt. These exemptions include:

- Spent solvents from non-specific sources (see p. 241:541)—carbon tetra-

chloride, tetrachloroethylene, and trichloroethylene—where it can be shown that the total weekly use of these solvents divided by the average weekly flow of wastewater into the headworks of the treatment or pre-treatment system does not exceed one part per million (ppm).

- Other spent solvents from non-specific sources—methylene chloride; 1,1,1-trichloroethane; chlorobenzene; o-dichlorobenzene; cresols; cresylic acid; nitrobenzene; toluene; methyl ethyl ketone; carbon disulfide; isobutanol; pyridine; and spent chlorofluorocarbon solvents—if the amounts do not exceed 25 ppm based on the formula mentioned above.

- Heat exchanger bundle cleaning sludge from the petroleum refining industry. (See waste No. K050 in list beginning at p. 241:541.)

- Discarded commercial chemical products or intermediates used as raw materials or that are byproducts from the manufacturing process when they are *de minimis* losses resulting from normal material handling operations. These losses might occur from spills during loading or transfer of materials, pipeline leaks, minor leaks from storage containers, relief valve discharges, and rinsings from personal safety equipment, etc.

- Toxic wastes (see p. 241:561) from laboratory wastewaters provided that neither the annual average total wastewater flow nor the combined annual average waste concentration exceeds 1 percent or one ppm respectively of the flow into the headworks of the plant's wastewater treatment or pre-treatment system.

Solid wastes — EPA has excluded the following solid wastes or containers from regulation:

- Empty containers or inner liners A container or inner liner removed from a container that has held any hazardous

waste except a compressed gas, or that is an acute hazardous waste is considered empty if: all wastes have been removed; it contains less than one inch of a hazardous waste; the residue is no more than 3 percent of total capacity weight in containers of less than 110 gallons; or the residue is no more than 0.3 percent of total capacity weight in containers of more than 110 gallons. Compressed gas containers are empty when the pressure in the container approaches atmospheric. Containers or inner liners that held acutely hazardous waste are empty when triple-rinsed with a solvent that removes commercial chemical products or manufacturing chemical intermediates or by another method that achieves equivalent removal; or by simply removing the liner in the case of lined containers.

- Arsenical-treated wood product wastes that have been discarded by ultimate users such as construction and utility companies and that have been classified as hazardous solely because they fail the test for Extraction Procedure (EP) toxicity.

- Pipeline wastes — hazardous materials generated from waste products in a pipeline — are exempted from regulation until they are removed or have remained in the pipeline for more than 90 days after the pipeline ceases to operate.

- Wastewater treatment units defined as tanks that receive, treat, or store influent hazardous wastewater or that generate and accumulate hazardous wastewater treatment sludge when regulated by Section 402 or 307 (b) of the Clean Water Act.

- Elementary neutralization units (tanks, containers, transport vehicles, or vessels) that neutralize wastes consid-

ered hazardous solely because they exhibit the corrosivity characteristic.

- Tannery wastes from the leather-tanning industry, shoe manufacturers, and other manufacturers of leather products, and wastes generated from processes using trivalent chromium exclusively, or nearly exclusively, and that are typically managed in non-oxidizing environments.

- Wastewater treatment sludges from titanium dioxide production using chromium bearing ores by the chloride process.

- Mining and cement industries wastes. Other solid wastes such as spent solvents, pesticide wastes, and discarded commercial chemical products are not exclusive to these industries and remain under regulation.

- Accidental hazardous waste spills during immediate cleanup, containment, and treatment.

- Agricultural wastes used as fertilizer.

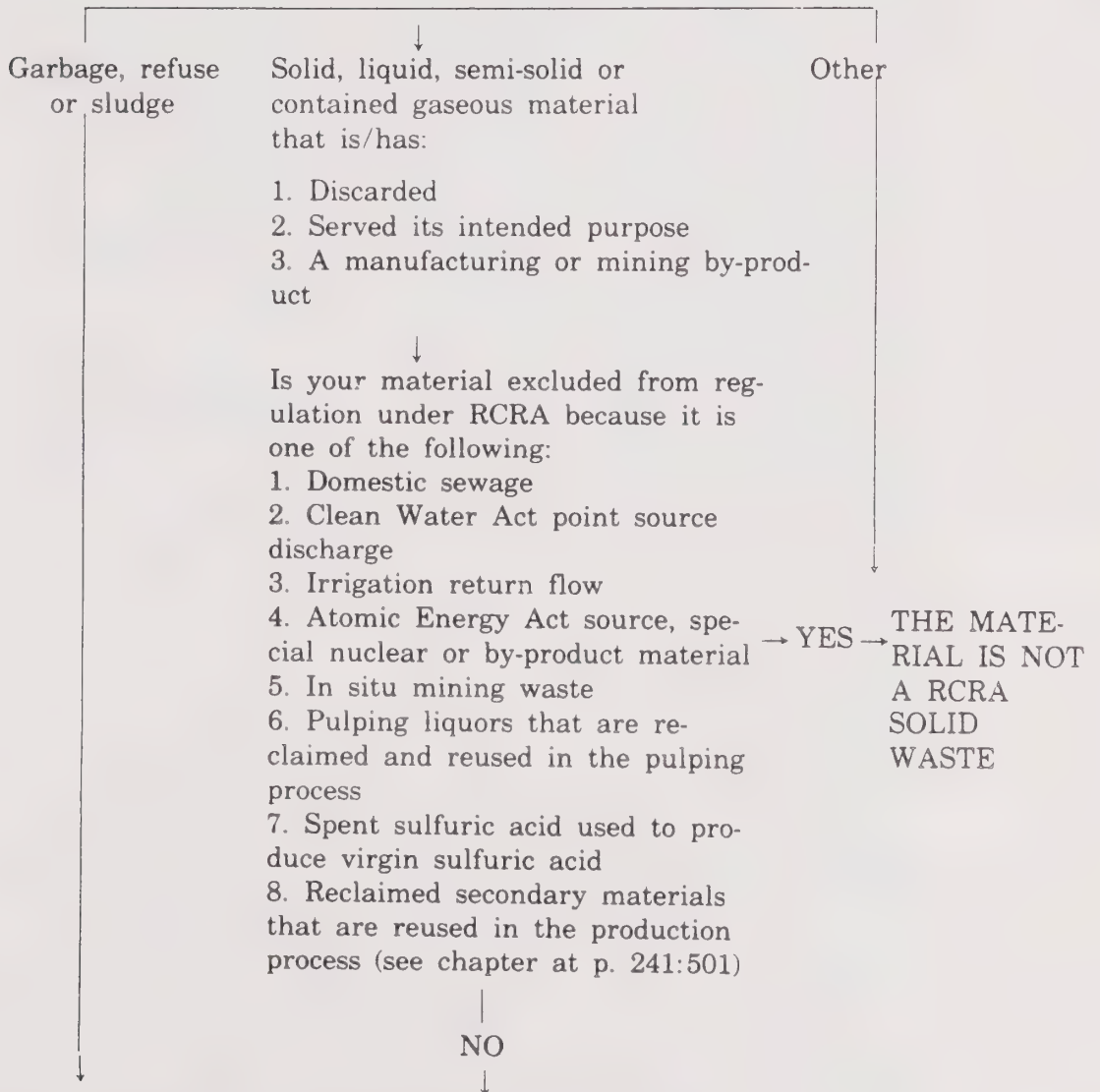
- Fly ash waste, bottom ash waste, slag waste, and flue gas emission control waste generated primarily from the combustion of coal or other fossil fuels.

- Wastes from the exploration, development, or production of crude oil, natural gas, or geothermal energy.

- Animal manures and other animal-associated wastes.

- Household wastes, including wastes that have been collected, transported, stored, treated, disposed of, recovered for fuel, or reused. Such wastes include garbage, trash, and sanitary wastes in septic tanks. Household wastes may come from single and multiple residences, hotels, motels, bunkhouses, ranger stations, crew quarters, campgrounds, picnic grounds, and day use recreation areas. Municipal resource recovery facilities that accept and burn

I
DEFINITION OF A SOLID WASTE
All materials



THE MATERIAL IS A RCRA SOLID WASTE
irrespective of whether you:

1. Discard it
2. Use it
3. Reuse it
4. Recycle it
5. Reclaim it
6. Store it or accumulate it for the purposes stated in 1-8 above

II DEFINITION OF A HAZARDOUS WASTE

Is the solid waste excluded from regulation? (See chapter at p. 241:501 under "Exemptions.")

____ YES ____

NO

Is the solid waste included in the list of hazardous wastes found at pp. 241:541, 551, and 561, or is it a mixture that contains one of those wastes?

____ NO ____

YES

Has the waste or mixture been excluded from the hazardous wastes listing (see above) in accordance with an amendment petition?

____ YES ____

NO

Does the waste exhibit any of the characteristics specified in the chapter found at p. 241:501?

YES

NO

THE WASTE IS A
HAZARDOUS WASTE
(see figure III)

THE WASTE IS SUBJECT
TO CONTROL UNDER
HAZARDOUS WASTE
MANAGEMENT REGULA-
TIONS IF LAND DIS-
POSED

III PROVISIONS FOR CERTAIN HAZARDOUS WASTES

THE WASTE IS HAZARDOUS

↓
YES
↓

Is it generated by a small quantity generator as defined in the chapter at p. 241:971?

YES →

IT IS SUBJECT TO THE REQUIREMENTS OF THAT CHAPTER.

↓
NO
↓

Is it or will it be legitimately and beneficially used, reused, recycled, or reclaimed?

NO →

Then it must be intended for disposal. IT IS SUBJECT TO THE HAZARDOUS WASTE MANAGEMENT REGULATIONS DIAGRAMED IN FIGURE IV.

↓
YES
↓

Is it a sludge, or is it a waste or a mixture of a waste contained in the hazardous waste listing at pp. 241:541, 241:551, and 241:561?

NO →

IT IS NOT SUBJECT TO THE HAZARDOUS WASTE MANAGEMENT REGULATIONS (Subtitle C)

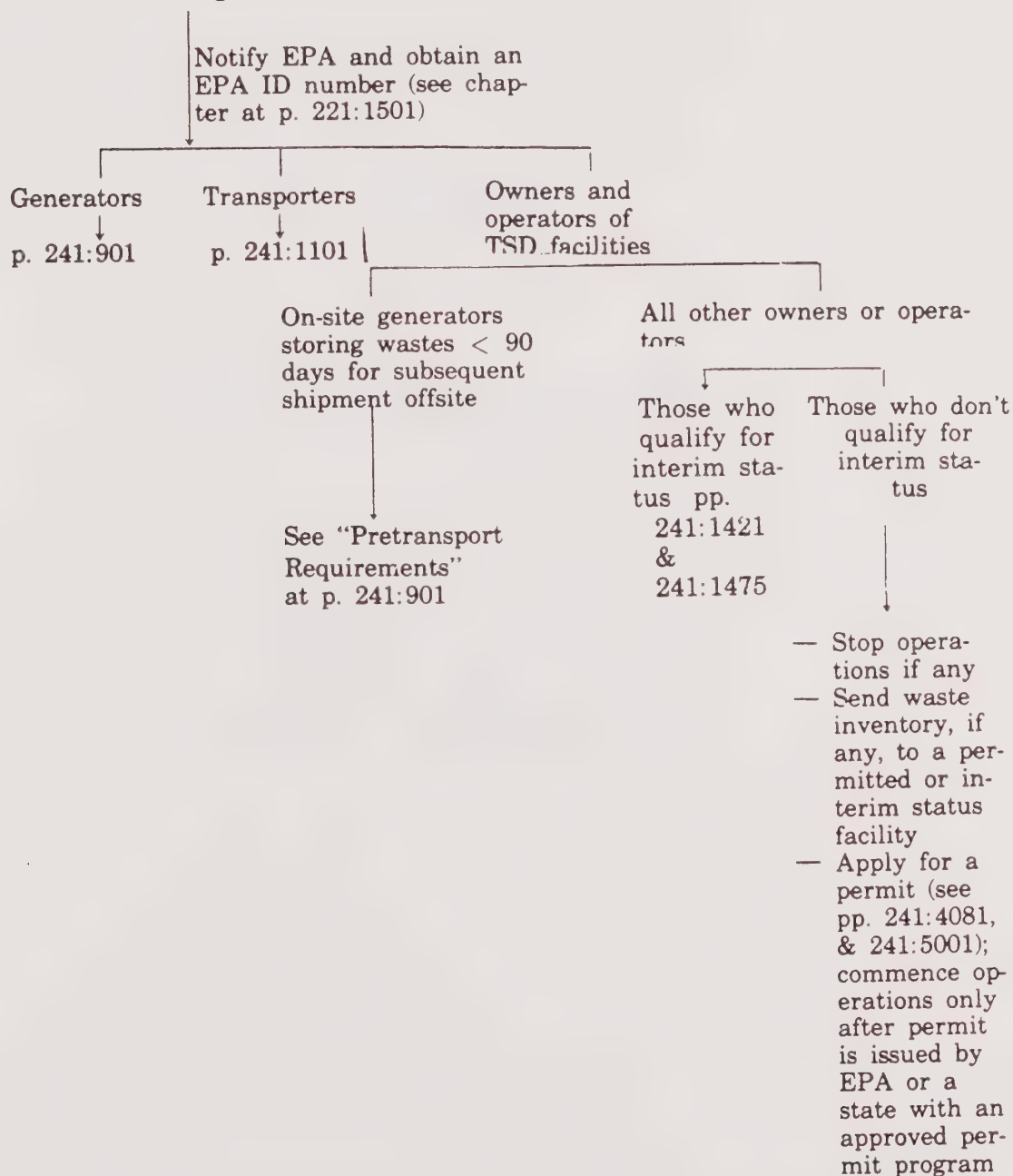
↓
YES
↓

IT IS SUBJECT TO THE FOLLOWING WITH RESPECT TO ITS TRANSPORTATION OR STORAGE:

- Notification requirements found at p. 221:1501.
- Generator and transporter requirements found at pp. 241:901 and 241:1101, respectively.
- Interim status requirements for owners and operators of TSD facilities to include those found at pp. 241:1475, 241:1501, 241:1601, 241:1901, 241:2001, 241:2021, and 241:2061.
- Permit standards for owners and operators of TSD facilities to include those discussed at p. 241:6051.
- Permit process and procedures found at pp. 241:4081, 241:5001, 241:5031, and 241:5051.

IV
REQUIREMENTS FOR HAZARDOUS WASTE
NOT COVERED IN FIGURE III

All persons who handle hazardous wastes
subject to control under the hazardous
waste management regulations (Subtitle C)
not covered in figure III



ATTACHMENT B

HAZARDOUS WASTES AND HAZARDOUS MATERIALS
LISTED IN

CALIFORNIA ADMINISTRATIVE CODE
TITLE 22. SOCIAL SECURITY
DIVISION 4. ENVIRONMENTAL HEALTH

Article 9. Hazardous Wastes and Hazardous Materials

66680. Lists of Chemical Names and Common Names.

(a) A waste that meets the definition of hazardous waste presented in Section 25117 of the Health and Safety Code or satisfies any of the criteria of hazardous waste presented in Article 11 of this chapter shall be considered a hazardous waste whether or not the waste is cited in this article. Such a waste shall be handled and disposed of according to the provisions of this chapter.

(b) A waste that meets the definition of extremely hazardous waste presented in Section 25115 of the Health and Safety Code or satisfies any of the criteria of extremely hazardous waste presented in Article 11 of this chapter shall be considered an extremely hazardous waste whether or not the waste is cited in this article. Such a waste shall be handled and disposed of according to the provisions of this chapter.

(c) The potential hazardous property of a material cited in the List of Chemical Names or the List of Common Names is indicated in the list as follows: (T) toxic, (C) corrosive, (F) ignitable and (R) reactive. An asterisk (*) in Section 66680(d) denotes an extremely hazardous waste. All letters in trademark names are capitalized.

(d) List of Chemical Names:

1. Acetaldehyde (T,F)
2. Acetic acid (T,C,F)
3. Acetone, Propanone (F)
4. *Acetone cyanohydrin (T)
5. Acetonitrile (T,F)
6. *2-Acetylaminofluorene, 2-AAF (T)
7. Acetyl benzoyl peroxide (T,F,R)
8. *Acetyl chloride (T,C,R)
9. Acetyl peroxide (T,F,R)
10. Acridine (T)
11. *Acrolein, Aqualin (T,F)

12. *Acrylonitrile (T,F)
13. *Adiponitrile (T)
14. *Aldrin; 1,2,3,4,10,10-Hexachloro-1,4,4a,5,8,8a-hexahydro-1,4,5,8-endo-exodimethanonaphthalene (T)
15. *Alkyl aluminum chloride (C,F,R)
16. *Alkyl aluminum compounds (C,F,R)
17. Allyl alcohol, 2-Propen-1-ol (T,F)
18. Allyl bromide, 3-Bromopropene (T,F)
19. Allyl chloride, 3-Chloropropene (T,F)
20. Allyl chlorocarbonate, Allyl chloroformate (T,F)
21. *Allyl trichlorosilane (T,C,F,R)
22. Aluminum (powder) (F)
- 23A. Aluminum chloride (T,C)
- 23B. *Aluminum chloride (anhydrous) (T,C,R)
24. Aluminum fluoride (T,C)
25. Aluminum nitrate (T,F)
26. *Aluminum phosphide, PHOSTOXIN (T,F,R)
27. *4-Aminodiphenyl, 4-ADP (T)
28. *2-Aminopyridine (T)
29. *Ammonium arsenate (T)
30. *Ammonium bifluoride (T,C)
31. Ammonium chromate (T,F)
32. Ammonium dichromate, Ammonium bichromate (T,C,F)
33. Ammonium fluoride (T,C)
34. Ammonium hydroxide (T,C)
35. Ammonium molybdate (T)
36. Ammonium nitrate (F,R)
37. Ammonium perchlorate (F,R)
38. Ammonium permanganate (T,F,R)
39. Ammonium persulfate (F,R)
40. Ammonium picrate (T,R)
41. Ammonium sulfide (T,C,F,R)
42. n-Amyl acetate, 1-Acetoxypentane (and isomers) (T,F)
43. n-Amylamine, 1-Aminopentane (and isomers) (T,F)
44. n-Amyl chloride, 1-Chloropentane (and isomers) (T,F)
45. n-Amylene, 1-Pentene (and isomers) (T,F)
46. n-Amyl mercaptan, 1-Pentanethiol (and isomers) (T,F)
47. n-Amyl nitrite, n-Pentyl nitrite (and isomers) (T,F)
48. *Amyl trichlorosilane (and isomers) (T,C,R)
49. Aniline, Aminobenzene (T)
50. Anisoyl chloride (T,C)
51. Anthracene (T)
52. Antimony (T)
53. Antimony compounds (T)
54. *Antimony pentachloride (T,C,R)
55. *Antimony pentafluoride (T,C,R)
56. Antimony pentasulfide (T,F)
57. Antimony potassium tartrate (T)
58. Antimony sulfate, Antimony trisulfate (T,F)

59. Antimony trichloride, Antimony chloride (T,C)
60. Antimony trifluoride, Antimony fluoride (T,C)
61. Antimony trioxide, Antimony oxide (T)
62. Antimony trisulfide, Antimony sulfide (T,F,R)
63. *Arsenic (T)
64. *Arsenic acid and salts (T)
65. *Arsenic compounds (T)
66. *Arsenic pentaselenide (T)
67. *Arsenic pentoxide, Arsenic oxide (T)
68. *Arsenic sulfide, Arsenic disulfide (T)
69. *Arsenic tribromide, Arsenic bromide (T)
70. *Arsenic trichloride, Arsenic chloride (T)
71. *Arsenic triiodide, Arsenic iodide (T)
72. *Arsenic trioxide, Arsenious oxide (T)
73. *Arsenious acid and salts (T)
74. *Arsines (T)
75. Asbestos (including chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite) (T)
76. *AZODRIN, 3-Hydroxy-N-cis-crotonamide (T)
77. Barium (T,F)
78. Barium azide (T,R)
79. Barium bromide (T)
80. Barium carbonate (T)
81. Barium chlorate (T,C,F,R)
82. Barium chloride (T)
83. Barium chromate (T)
84. Barium citrate (T)
85. Barium compounds (soluble) (T)
86. *Barium cyanide (T)
87. Barium fluoride (T)
88. Barium fluosilicate (T)
89. Barium hydroxide (T)
90. Barium iodide (T)
91. Barium manganate (T)
92. Barium nitrate (T,F)
93. Barium oxide, Barium monoxide (T)
94. Barium perchlorate (T,F,R)
95. Barium permanganate (T,F,R)
96. Barium peroxide (T,F,R)
97. Barium phosphate (T)
98. Barium stearate (T)
99. Barium sulfide (T)
100. Barium sulfite (T)
101. Benzene (T,F)
102. *Benzene hexachloride, BHC; 1,2,3,4,5,6-Hexachlorocyclohexane (T)
103. *Benzenephosphorous dichloride (T,R)
104. Benzenesulfonic acid (T)
105. *Benzidine and salts (T)
106. *Benzotrifluoride, Trifluoromethylbenzene (T,F)

107. *Benzoyl chloride (T,C,R)
108. Benzoyl peroxide, Dibenzoyl peroxide (T,F,R)
109. Benzyl bromide, alpha-Bromotoluene (T,C)
110. Benzyl chloride, alpha-Chlorotoluene (T)
111. *Benzyl chlorocarbonate, Benzyl chloroformate (T,C,R)
112. *Beryllium (T,F)
113. *Beryllium chloride (T)
114. *Beryllium compounds (T)
115. *Beryllium copper (T)
116. *Beryllium fluoride (T)
117. *Beryllium hydride (T,C,F,R)
118. *Beryllium hydroxide (T)
119. *Beryllium oxide (T)
120. *BIDRIN, Dicrotophos, 3-(Dimethylamino)-1-methyl-3-oxo-1-propenyl dimethyl phosphate (T)
121. *bis (Chloromethyl) ether, Dichloromethylether, BCME (T)
122. Bismuth (T,F)
123. *bis (Methylmercuric) sulfate, CEREWET, Ceresan liquid (T)
124. Bismuth chromate (T)
125. *BOMYL, Dimethyl 3-hydroxyglutaconate dimethyl phosphate (T)
126. *Boranes (T,F,R)
127. *Bordeaux arsenites (T)
128. *Boron trichloride, Trichloroborane (T,C,R)
129. *Boron trifluoride (T,C,R)
130. Bromic acid (T)
131. *Bromine (T,C,F)
132. *Bromine pentafluoride (T,C,F,R)
133. *Bromine trifluoride (T,C,F,R)
134. *Brucine, Dimethoxystrychnine (T)
135. 1,2,4-Butanetriol trinitrate (R)
136. n-Butyl acetate, 1-Acetoxybutane (and isomers) (T)
137. n-Butyl alcohol, 1-Butanol (and isomers) (T)
138. n-Butyl amine, 1-Aminobutane (and isomers) (T)
139. n-Butyl formate (and isomers) (T)
140. tert-Butyl hydroperoxide (and isomers) (T,F)
141. *n-Butyllithium (and isomers) (T,C,F,R)
142. n-Butyl mercaptan, 1-Butanethiol (and isomers) (T,F)
143. tert-Butyl peroxyacetate, tert-Butyl peracetate (F,R)
144. tert-Butyl peroxybenzoate, tert-Butyl perbenzoate (F,R)
145. tert-Butyl peroxy-pivalate (F,R)
146. *n-Butyltrichlorosilane (C,F,R)
147. para-tert-Butyl toluene (T)
148. n-Butyraldehyde, n-Butanal (and isomers) (T,F)
149. *Cacodylic acid, Dimethylarsinic acid (T)
150. *Cadmium (powder) (T,F)
151. Cadmium chloride (T)
152. *Cadmium compounds (T)
153. *Cadmium cyanide (T)
154. Cadmium fluoride (T)

155. Cadmium nitrate (T,F,R)
156. Cadmium oxide (T)
157. Cadmium phosphate (T)
158. Cadmium sulfate (T)
159. *Calcium (F,R)
160. *Calcium arsenate, PENSAL (T)
161. *Calcium arsenite (T)
162. *Calcium carbide (C,F,R)
163. Calcium chlorate (F,R)
164. Calcium chlorite (F)
165. Calcium fluoride (T)
166. *Calcium hydride (C,F,R)
167. Calcium hydroxide, Hydrated lime (C)
168. *Calcium hypochlorite, Calcium oxychloride (dry) (T,C,F,R)
169. Calcium molybdate (T)
170. Calcium nitrate, Lime nitrate, Nitrocalcite (F,R)
171. Calcium oxide, Lime (C)
172. Calcium permanganate (T,F)
173. Calcium peroxide, Calcium dioxide (C,F)
174. *Calcium phosphide (T,F,R)
175. Calcium resinate (F)
176. Caprylyl peroxide, Octyl peroxide (F)
177. *Carbanolate, BANOL, 2-Chloro-4,5-dimethylphenyl methylcarbamate (T)
178. Carbon disulfide, Carbon bisulfide (T,F)
179. Carbon tetrachloride, Tetrachloromethane (T)
180. *Carbophenothion, TRITHION, S[[(4-Chlorophenyl) thio]methyl] O, O-diethyl phosphorodithioate (T)
181. Chloral hydrate, Trichloroacetaldehyde (hydrated) (T)
182. *Chlordan; 1,2,4,5,6,7,8,8-Octachloro-4,7-methano-3a,4,7,7a-tetrahydroindane (T)
183. *Chlorfenvinphos, Compound 4072, 2-Chloro-1-(2,4-dichlorophenyl) vinyl diethyl phosphate (T)
184. *Chlorine (T,C,F,R)
185. *Chlorine dioxide (T,C,F,R)
186. *Chlorine pentafluoride (T,C,F,R)
187. *Chlorine trifluoride (T,C,F,R)
188. *Chloroacetaldehyde (T,C)
189. *alpha-Chloroacetophenone, Phenyl chloromethyl ketone (T)
190. *Chloroacetyl chloride (T,C,R)
191. Chlorobenzene (T,F)
192. para-Chlorobenzoyl peroxide (F,R)
193. *ortho-Chlorobenzylidene malonitrile, OCMB (T)
194. Chloroform, Trichloromethane (T)
195. *Chloropicrin, Chloropicrin, Trichloronitromethane (T)
196. *Chlorosulfonic acid (T,C,F,R)
197. Chloro-ortho-toluidine, 2-Amino-4-chlorotoluene (T)
198. Chromic acid, Chromium trioxide, Chromic anhydride (T,C,F)
199. Chromic chloride, Chromium trichloride (T)

- 200. Chromic fluoride, Chromium trifluoride (T)
- 201. Chromic hydroxide, Chromium hydroxide (T)
- 202. Chromic oxide, Chromium oxide (T)
- 203. Chromic sulfate, Chromium sulfate (T)
- 204. Chromium compounds (T,C,F)
- 205. *Chromyl chloride, Chlorochromic anhydride (T,C,F,R)
- 206. Cobalt (powder) (T,F)
- 207. Cobalt compounds (T)
- 208. Cobaltous bromide, Cobalt bromide (T)
- 209. Cobaltous chloride, Cobalt chloride (T)
- 210. Cobaltous nitrate, Cobalt nitrate (T,F)
- 211. Cobaltous resinate, Cobalt resinate (T,F)
- 212. Cobaltous sulfate, Cobalt sulfate (T)
- 213. Coccus, Fishberry, PicROTOXIN (T)
- 215. *Copper acetoarsenite, Paris green (T)
- 216. Copper acetylide (T,R)
- 217. *Copper arsenate, Cupric arsenate (T)
- 218. *Copper arsenite, Cupric arsenite (T)
- 219. Copper chloride, Cupric chloride (T)
- 220. Copper chlorotetrazole (T,R)
- 221. Copper compounds (T)
- 222. *Copper cyanide, Cupric cyanide (T)
- 223. Copper nitrate, Cupric nitrate (T,F,R)
- 224. Copper sulfate, Cupric sulfate, Blue vitriol (T)
- 225. *Coroxon; ortho,ortho-Diethyl-ortho-(3-chloro-4-methylcoumarin-7-yl) phosphate (T)
- 226. *Coumafuryl, FUMARIN, 3-[1-(2-Furanyl)-3-oxobutyl]1-4-hydroxy-2H-1-benzopyran-2-one (T)
- 227. *Coumatetralyl, BAYER 25634, RACUMIN 57, 4-Hydroxy-3-(1,2,3,4-tetrahydro-1-naphthalenyl)-2H-1-benzopyran-2-one (T)
- 228. *Crimidine, CASTRIX, 2-Chloro-4-dimethylamino-6-methylpyrimidine (T)
- 229. *Crotonaldehyde, 2-Butenal (T)
- 230. Cumene, Isopropyl benzene (T,F)
- 231. Cumene hydroperoxide; alpha,alpha-Dimethylbenzyl hydroperoxide (T,F)
- 232. Cupriethylene diamine (T)
- 233. *Cyanide salts (T)
- 234. Cyanoacetic acid, Malonic nitrile (T)
- 235. *Cyanogen (T,F,R)
- 236. Cyanogen bromide, Bromine cyanide (T)
- 237. Cyanuric triazide (T,R)
- 238. Cycloheptane (T,F)
- 239. Cyclohexane (T,F)
- 240. Cyclohexanone peroxide (F)
- 241. *Cyclohexenyltrichlorosilane (T,C,R)
- 242. *Cycloheximide, ACTIDIONE (T)
- 243. *Cyclohexyltrichlorosilane (T,C,R)
- 244. Cyclopentane (T,F)

- 245. Cyclopentanol (F)
- 246. Cyclopentene (T,F)
- 247. DDT; 1,1,1-Trichloro-2,2-bis(chlorophenyl) ethane (T)
- 248. *DDVP, Dichlorvos, VAPONA, Dimethyl dichlorovinyl phosphate (T)
- 249. *Decaborane (T,F,R)
- 250. DECALIN, Decahydronaphthalene (T)
- 251. *Demeton, SYSTOX (T)
- 252. *Demeton-S-methyl sulfone, METAISOSYSTOX-SULFON, S-[2-(ethyl-sulfonyl) ethyl] O,O-dimethyl phosphorothioate (T)
- 253. Diazodinitrophenol, DDNP, 2-Diazo-4,6-dinitrobenzene-1-oxide (T,R)
- 254. *Diborane, Diboron hexahydride (T,R)
- 255. *1,2-Dibromo-3-chloropropane, DBCP, FUMAZONE, NEMAGON (T)
- 256. n-Dibutyl ether, Butyl ether (and isomers) (T,F)
- 257. Dichlorobenzene (ortho, meta, para) (T)
- 258. *3,3-Dichlorobenzidine and salts, DCB (T)
- 259. 1,2-Dichloroethylene; 1,2-Dichloroethene (T,F)
- 260. Dichloroethyl ether, Dichloroether (T,F)
- 261. Dichloroisocyanuric acid, Dichloro-S-triazine-2,4,6-trione (T,F)
- 262. Dichloromethane, Methylene chloride (T)
- 263. *2,4-Dichlorophenoxyacetic acid; 2,4-D (T)
- 264. 1,2-Dichloropropane, Propylene dichloride (T,F)
- 265. 1,3-Dichloropropylene; 1,3-Dichloropropene (T,F)
- 266. Dicumyl peroxide (F,T)
- 267. *Dieldrin; 1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4a,5,6,7,8,8a-octahydro-1,4-endo, exo-5,8-dimethanonaphthalene (T)
- 268. *Diethylaluminum chloride, Aluminum diethyl monochloride, DEAC (F,R)
- 269. Diethylamine (T,F)
- 270. *Diethyl chlorovinyl phosphate, Compound 1836 (T)
- 271. *Diethyldichlorosilane (T,C,F,R)
- 272. Diethylene glycol dinitrate (T,R)
- 273. Diethylene triamine (T)
- 274. *O,O-Diethyl-S-(isopropylthiomethyl) phosphorodithioate (T)
- 275. *Diethylzinc, Zinc ethyl (C,F,R)
- 276. *Difluorophosphoric acid (T,C,R)
- 277. *Diglycidyl ether, bis(2,3-Epoxypropyl) ether (T)
- 278. Diisopropylbenzene hydroperoxide (T,F)
- 279. Diisopropyl peroxydicarbonate, Isopropyl percarbonate (T,C,F,R)
- 280. *Dimefox, HANANE, PEXTOX 14, Tetramethylphosphorodiamidic fluoride (T)
- 281. Dimethylamine, DMA (T,F)
- 282. *Dimethylaminoazobenzene, Methyl yellow (T)
- 283. *Dimethyldichlorosilane, Dichlorodimethylsilane (T,C,F,R)
- 284. 2,5-Dimethylhexane-2,5-Dihydroperoxide (F)
- 285. *1,1-Dimethylhydrazine, UDMH (T,F)
- 286. *Dimethyl sulfate, Methyl sulfate (T)
- 287. *Dimethyl sulfide, Methyl sulfide (T,F,R)
- 288. 2,4-Dinitroaniline (T)
- 289. *Dinitrobenzene (ortho, meta, para) (T,R)

290. Dinitrochlorobenzene, 1-Chloro-2,4-dinitrobenzene (T,R)
291. *4,6-Dinitro-ortho-cresol, DNPC, SINOX, EGETOL 30 (T)
292. *Dinitrophenol (2,3-;2,4-;2,6-isomers) (T,R)
293. 2,4-Dinitrophenylhydrazine (T,F,R)
294. Dinitrotoluene (2,4-;3,4-;3,5-isomers) (T,F,R)
295. *DINOSEB; 2,4-Dinitro-6-sec-butylphenol (T)
296. 1,4-Dioxane; 1,4-Diethylene dioxide (T,F,R)
297. *Dioxathion, DELNAV;S,S-1,4-dioxane-2,3-diyl bis(O,O-diethyl phosphorodithioate) (T)
298. Dipentaerythritol hexanitrate (R)
299. *Diphenyl, Biphenyl, Phenylbenzene (T)
300. Diphenylamine, DPA, N-Phenylaniline (T)
301. *Diphenylamine chloroarsine, Phenarsazine chloride (T)
302. *Diphenyldichlorosilane (T,C,R)
303. Dipicrylamine, Hexanitrodiphenyl amine (T,R)
304. Dipropyl ether (T,F)
305. *Disulfoton, DI-SYSTON;O,O-Diethyl S-[2-(ethylthio) ethyl] phosphorodithioate (T)
306. *Dodecyltrichlorosilane (T,C,R)
307. *DOWCO-139, ZECTRAN, Mexacarbate, 4-(Dimethylamino)-3,5-dimethylphenyl methylcarbamate (T)
309. *DYFONATE, Fonofos, O-Ethyl-S-phenylethyl phosphonodithioate (T)
310. *Endosulfan, THIODAN; 6,7,8,9,10,10-Hexachloro- 1,5,5a,6,9,9a-hexahydro-6,9-methano-2,4,3-benzo-dioxathiepin-3-oxide (T)
311. *Endothal, 7-Oxabicyclo [2.2.1]heptane-2,3-dicarboxylic acid (T)
312. *Endothion, EXOTHION, S-[(5-Methoxy-4-oxo-4H-pyran-2-yl)-methyl] O,O-dimethyl phosphorothioate (T)
313. *Endrin; 1,2,3,4,10,10-Hexachloro-6,7-epoxy-1,4,4,4a,5,6,7,8,8a-octahydro-1,4-endo-endo-5,8-dimethanonaphthalene (T)
314. Epichlorohydrin, Chloropropylene oxide (T,F)
315. *EPN; O-Ethyl O-para-nitrophenyl phenylphosphonothioate (T)
316. *Ethion, NIALATE;O,O,O',O'-Tetraethyl-S,S-methylenediphosphorodithioate (T)
317. Ethyl acetate (T,F)
318. Ethyl alcohol, Ethanol (T,F)
319. Ethylamine, Aminoethane (T,F)
320. Ethylbenzene, Phenylethane (T,F)
321. Ethyl butyrate, Ethyl butanoate (F)
322. Ethyl chloride, Chloroethane (T,F)
323. *Ethyl chloroformate, Ethyl chlorocarbonate (T,C,F,R)
324. *Ethyldichloroarsine, Dichloroethylarsine (T,R)
325. *Ethyldichlorosilane (T,C,F,R)
326. *Ethylene cyanohydrin, beta-Hydroxypropionitrile (T,R)
327. Ethylene diamine (T)
328. Ethylene dibromide; 1,2-Dibromoethane (T)
329. Ethylene dichloride; 1,2-Dichloroethane (T,F)
330. *Ethyleneimine, Aziridine, EI (T,F,R)
331. Ethylene oxide, Epoxyethane (T,F,R)
332. Ethyl ether, Diethyl ether (F,R)

- 333. Ethyl formate (T,F)
- 334. *Ethyl mercaptan, Ethanethiol (T,F,R)
- 335. Ethyl nitrate (F,R)
- 336. Ethyl nitrite (F,R)
- 337. *Ethylphenyldichlorosilane (T,C,R)
- 338. Ethyl propionate (F)
- 339. *Ethyltrichlorosilane (T,R)
- 340. *Fensulfothion, BAYER 25141, DASANIT, O,O-Diethyl-O-[4-(methylsulfinyl)phenyl] phosphorothioate (T)
- 341. *Ferric arsenate (T)
- 342. Ferric chloride, Iron (III) chloride (T,C)
- 343. *Ferrous arsenate, Iron arsenate (T)
- 344. *Fluoboric acid, Fluoroboric acid (T,C)
- 345. Fluoride salts (T)
- 346. *Fluorine (T,C,R)
- 347. *Fluoroacetanilide, AFL 1082 (T)
- 348. *Fluoroacetic acid and salts, Compound 1080 (T)
- 349. *Fluorosulfonic acid, Fluosulfonic acid (T,C,R)
- 350. Formaldehyde, Methanal (T,F)
- 351. Formic acid, Methanoic acid (T,C)
- 352. Fulminate of mercury, Mercuric cyanate (T,R)
- 353. *FURADAN, NIA 10,242, Carbofuran; 2,3-Dihydro-2,2-dimethyl-7-benzofuranylmethylcarbamate (T)
- 354. Furan, Furfuran (T,F,R)
- 355. Gasoline (F)
- 356. *GB, O-Isopropyl methyl phosphoryl fluoride (T)
- 357. Glutaraldehyde (T)
- 358. Glycerolmonolactate trinitrate (R)
- 359. Glycol dinitrate, Ethylene glycol dinitrate (R)
- 360. Gold fulminate, Gold cyanate (R)
- 361. Guanidine nitrate (F,R)
- 362. Guanyl nitrosaminoguanilydene hydrazine (R)
- 363. *Guthion; O,O-Dimethyl-S-4-oxo-1,2,3-benzotriazin-3(4H)-ylmethyl phosphorodithioate (T)
- 364. Hafnium (F,T,R)
- 365. *Heptachlor; 1,4,5,6,7,8,8-Heptachloro-3a,4,7,7a-tetrahydro-4,7-methanoindene (T)
- 366. n-Heptane (and isomers) (T,F)
- 367. 1-Heptene (and isomers) (T,F)
- 368. *Hexadecyltrichlorosilane (T,C,R)
- 369. Hexaethyl tetraphosphate, HETP (T)
- 370. Hexafluorophosphoric acid (T,C)
- 371. Hexamethylenediamine; 1,6-Diaminohexane (T)
- 372. n-Hexane (and isomers) (T,F)
- 373. 1-Hexene (and isomers) (T,F)
- 374. n-Hexylamine, 1-Aminohexane (and isomers) (T,F)
- 375. *Hexyltrichlorosilane (T,C,R)
- 376. *Hydrazine, Diamine (T,F)
- 377. Hydrazine azide (T,R)

- 378. Hydrazoic acid, Hydrogen azide (T,R)
- 379. *Hydriodic acid, Hydrogen iodide (T,C,R)
- 380. *Hydrobromic acid, Hydrogen bromide (T,C,R)
- 381. *Hydrochloric acid, Hydrogen chloride, Muriatic Acid (T,C,R)
- 382. *Hydrocyanic acid, Hydrogen cyanide (T,F,R)
- 383. *Hydrofluoric acid, Hydrogen fluoride (T,C,R)
- 384. Hydrofluosilicic acid, Fluosilicic acid (T,C)
- 385. Hydrogen peroxide (T,C,F,R)
- 386. *Hydrogen selenide (T,F)
- 387. *Hydrogen sulfide (T,F)
- 388. *Hypochlorite compounds (T,C,F,R)
- 389. Indium (T)
- 390. Indium compounds (T)
- 391. Iodine monochloride (T,C,R)
- 392. Isooctane; 2,2,4-Trimethylpentane (T,F)
- 393. Isooctene (mixture of isomers) (F)
- 394. Isopentane, 2-Methylbutane (F)
- 395. Isoprene, 2-Methyl-1,3-butadiene (T,F,R)
- 396. Isopropanol, Isopropyl alcohol, 2-Propanol (T,F)
- 397. Isopropyl acetate (T,F)
- 399. Isopropylamine, 2-Aminopropane (T,F)
- 400. Isopropyl chloride, 2-Chloropropane (F)
- 401. Isopropyl ether, Diisopropyl ether (F,R)
- 402. Isopropyl mercaptan, 2-Propanethiol (T,F)
- 404. *meta-Isopropylphenyl-N-methylcarbamate, Ac 5,727 (T)
- 405A. *Kepone; 1,1a,3,3a,4,5,5,5a,5b,6-Decachlorooctahydro-1,2,4-metheno-2H-cyclobuta (cd) pentalen-2-one, Chlorecone (T)
- 405B. Lauroyl peroxide, Di-n-dodecyl peroxide (T,C,F,R)
- 406. Lead compounds (T)
- 407. Lead acetate (T)
- 408. *Lead arsenate, Lead orthoarsenate (T)
- 409. *Lead arsenite (T)
- 410. Lead azide (T,R)
- 411. Lead carbonate (T)
- 412. Lead chlorite (T,R)
- 413. *Lead cyanide (T)
- 414. Lead 2,4-dinitroresorcinate (T,R)
- 415. Lead mononitroresorcinate (T,R)
- 416. Lead nitrate (T,F)
- 417. Lead oxide (T)
- 418. Lead styphnate, Lead trinitroresorcinate (T,R)
- 419. *Lewisite, beta-Chlorovinylchloroarsine (T)
- 420. *Lithium (C,F,R)
- 421. *Lithium aluminum hydride, LAH (C,F,R)
- 422. *Lithium amide (C,F,R)
- 423. *Lithium ferrosilicon (F,R)
- 424. *Lithium hydride (C,F,R)
- 425. *Lithium hypochlorite (T,C,F,R)
- 426. Lithium peroxide (C,F,R)

- 427. Lithium silicon (F,R)
- 428. *London purple, Mixture of arsenic trioxide, aniline, lime, and ferrous oxide (T)
- 429. *Magnesium (F,R)
- 430. *Magnesium arsenate (T)
- 431. *Magnesium arsenite (T)
- 432. Magnesium chlorate (F,R)
- 433. Magnesium nitrate (F,R)
- 434. Magnesium perchlorate (T,F,R)
- 435. Magnesium peroxide, Magnesium dioxide (F)
- 436. *Maleic anhydride (T)
- 437. Manganese (powder) (F)
- 438. Manganese acetate (T)
- 439. *Manganese arsenate, Manganous arsenate (T)
- 440. Manganese bromide, Manganous bromide (T)
- 441. Manganese chloride, Manganous chloride (T)
- 442. Manganese methylcyclopentadienyl tricarbonyl (T)
- 443. Manganese nitrate, Manganous nitrate (T,F)
- 444. Mannitol hexanitrate, Nitromannite (R)
- 445. *MECARBAM;O,O-Diethyl S-(N-ethoxycarbonyl N-methylcarbamoyl-methyl) phosphorodithioate (T)
- 446. *Medinoterb acetate, 2-tert-Butyl-5-methyl-4,6-dinitrophenyl acetate (T)
- 447. para-Menthane hydroperoxide, Paramenthane hydroperoxide (F)
- 448. Mercuric acetate, Mercury acetate (T)
- 449. Mercuric ammonium chloride, Mercury ammonium chloride (T)
- 450. Mercuric benzoate, Mercury benzoate (T)
- 451. Mercuric bromide, Mercury bromide (T)
- 452. *Mercuric chloride, Mercury chloride (T)
- 453. *Mercuric cyanide, Mercury cyanide (T)
- 454. Mercuric iodide, Mercury iodide (T)
- 455. Mercuric nitrate, Mercury nitrate (T,F)
- 456. Mercuric oleate, Mercury oleate (T)
- 457. Mercuric oxide (red and yellow) (T,F)
- 458. Mercuric oxycyanide (T,R)
- 459. Mercuric-potassium iodide, Mayer's reagent (T)
- 460. Mercuric salicylate, Salicylated mercury (T)
- 461. Mercuric subsulfate, Mercuric dioxysulfate (T)
- 462. Mercuric sulfate, Mercury sulfate (T)
- 463. Mercuric thiocyanide, Mercury thiocyanate (T)
- 464. Mercurol, Mercury nucleate (T)
- 465. Mercurous bromide (T)
- 466. Mercurous gluconate (T)
- 467. Mercurous iodide (T)
- 468. Mercurous nitrate (T,R)
- 469. Mercurous oxide (T)
- 470. Mercurous sulfate, Mercury bisulfate (T)
- 472. *Mercury (T)
- 473. *Mercury compounds (T)

- 474. Metal carbonyls (T)
- 475. *Metal hydrides (F,R)
- 476. Metal powders (T,F)
- 477A. *Methomyl, LANNATE, S-Methyl-N-((methyl-carbamoyl)oxy) thioacetimidate (T)
- 477B. *Methoxychlor; 1,1,1-Trichloro-2, 2-bis(p-methoxyphenyl)ethane, CHEMFLOM, MARLATE (T)
- 478. *Methoxyethylmercuric chloride, AGALLOL, ARETAN (T)
- 479. Methyl acetate (T,F)
- 480. Methyl acetone (Mixture of acetone, methyl acetate, and methyl alcohol) (T,F)
- 481. Methyl alcohol, Methanol (T,F)
- 482. *Methylaluminum sesquibromide (F,R)
- 483. *Methylaluminum sesquichloride (F,R)
- 484. Methylamine, Aminomethane (T,F)
- 485. N-Methylaniline (T)
- 486. *Methyl bromide, Bromomethane (T)
- 487. 2-Methyl-1-butene (F)
- 488. 3-Methyl-1-butene (F)
- 489. Methyl butyl ether (and isomers) (T,F)
- 490. Methyl butyrate (and isomers) (T,F)
- 491. Methyl chloride, Chloromethane (T,F)
- 492. *Methyl chloroformate, Methyl chlorocarbonate (T,F,R)
- 493. *Methyl chloromethyl ether, CMME (T,F)
- 494. Methylcyclohexane (T,F)
- 495. *Methyldichloroarsine (T)
- 496. *Methyldichlorosilane (T,F,R)
- 497. *4,4-Methylene bis(2-chloroaniline), MOCA (T)
- 498. Methyl ethyl ether (T,F)
- 499. Methyl ethyl ketone, 2-Butanone (T,F)
- 500. Methyl ethyl ketone peroxide (T,F)
- 501. Methyl formate (T,F)
- 502. *Methyl hydrazine, Monomethyl hydrazine, MMH (T,F)
- 503. *Methyl isocyanate (T,F)
- 504. Methyl isopropenyl ketone, 3-Methyl-3-butene-2-one (T,F)
- 505. *Methylmagnesium bromide (C,F,R)
- 506. *Methylmagnesium chloride (C,F,R)
- 507. *Methylmagnesium iodide (C,F,R)
- 508. Methyl mercaptan, Methanethiol (T,F)
- 509. Methyl methacrylate (monomer) (T,F)
- 510. *Methyl parathion;O,O-Dimethyl-O-para-nitrophenylphosphorothioate (T)
- 511. Methyl propionate (F)
- 512. *Methyltrichlorosilane (T,C,F,R)
- 513. Methyl valerate, Methyl pentanoate (and isomers) (F)
- 514. Methyl vinyl ketone, 3-Butene-2-one (T,F)
- 515A. *Mevinphos, PHOSDRIN, 2-Carbomethoxy-1-methylvinyl dimethyl phosphate (T)
- 515B. *Mirex; 1,1a,2,2,3,3a,4,5,5,5a,5b,6-Dodecachlorooctahydro-1, 3, 4-metheno-1H-cyclobuta (cd) pentalene, Dechlorane (T)

- 516. *MOCAP, O-Ethyl-S,S-dipropyl phosphorodithioate (T)
- 517. Molybdenum (powder) (F)
- 518. Molybdenum trioxide, Molybdenum anhydride (T)
- 519. Molybdic acid and salts (T)
- 520. Monochloroacetic acid, Chloroacetic acid, MCA (T,C)
- 521. Monochloroacetone, Chloroacetone, 1-Chloro-2-propanone (T)
- 522. Monofluorophosphoric acid (T,C)
- 523. Naphtha (of petroleum or coal tar origin), Petroleum ether, Petroleum naphtha (T,F)
- 524. Naphthalene (T,S)
- 525. *alpha-Naphthylamine, 1-NA (T)
- 526. *beta-Naphthylamine, 2-NA (T)
- 527. Neohexane; 2,2-Dimethylbutane (T,F)
- 528. Nickel (powder) (T,F)
- 529. Nickel acetate (T)
- 530. Nickel antimonide (T)
- 531. *Nickel arsenate, Nickelous arsenate (T)
- 532. *Nickel carbonyl, Nickel tetracarbonyl (T)
- 533. Nickel chloride, Nickelous chloride (T)
- 534. *Nickel cyanide (T)
- 535. Nickel nitrate, Nickelous nitrate (T,F,R)
- 536. Nickel selenide (T)
- 537. Nickel sulfate (T)
- 538. Nicotine, beta-pyridyl-alpha-N-methyl pyrrolidine (T)
- 539. Nicotine salts (T)
- 540. Nitric acid (T,C,F)
- 541. Nitroaniline, Nitraniline (ortho, meta, para) (T,R)
- 542. *Nitrobenzol, Nitrobenzene (T)
- 543. *4-Nitrobiphenyl, 4-NBP (T)
- 544. Nitro carbo nitrate (F,R)
- 545. Nitrocellulose, Cellulose nitrate, Guncotton, Pyroxylin, Collodion, Pyroxylin (nitrocellulose) in ether and alcohol (F,R)
- 546. Nitrochlorobenzene, Chloronitrobenzene (ortho,meta,para) (T)
- 547. Nitrogen mustard (T,C)
- 548. Nitrogen tetroxide, Nitrogen dioxide (T,F)
- 549. Nitroglycerin, Trinitroglycerin (T,F,R)
- 550. Nitrohydrochloric acid, Aqua regia (T,C,F)
- 551. *Nitrophenol (ortho, meta, para) (T)
- 552. *N-Nitrosodimethylamine, Dimethyl nitrosoamine (T)
- 553. Nitrosoguanidine (R)
- 554. Nitrostarch, Starch nitrate (F,R)
- 555. Nitroxylol, Nitroxylene, Dimethylnitrobenzene (2,4-;3,4-;2,5-isomers) (T)
- 556. 1-Nonene, 1-Nonylene (and isomers) (T,F)
- 557. *Nonyltrichlorosilane (T,R)
- 558. *Octadecyltrichlorosilane (T,R)
- 559. n-Octane (and isomers) (T,F)
- 560. 1-Octene, 1-Caprylene (T,F)

- 561. *Octyltrichlorosilane (T,R)
- 563. *Oleum, Fuming sulfuric acid (T,C,R)
- 565. Osmium compounds (T)
- 566. Oxalic acid (T)
- 567. *Oxygen difluoride (T,C,R)
- 568. *Para-oxon, MINTACOL; O,O-Diethyl-O-para-nitrophenyl phosphate (T)
- 569. *Parathion; O,O-Diethyl-O-para-nitrophenyl phosphorothioate (T)
- 570A. *Pentaborane (T,F,R)
- 570B. Pentachlorophenol, PCP, DOWICIDE 7 (T)
- 571. Pentaerythrite tetranitrate, Pentaerythritol tetranitrate (R)
- 572. n-Pentane (and isomers) (T,F)
- 573. 2-Pentanone, Methyl propyl ketone (and isomers) (T,F)
- 574. Peracetic acid, Peroxyacetic acid (T,C,F,R)
- 575. Perchloric acid (T,C,F,R)
- 576. Perchloroethylene, Tetrachloroethylene (T)
- 577. *Perchloromethyl mercaptan, Trichloromethylsulfenyl chloride (T)
- 578. Perchloryl fluoride (T,C,F)
- 580. Phenol, Carboic acid (T,C)
- 581. *Phenyldichloroarsine (T,I)
- 582. Phenylenediamine, Diaminobenzene (ortho,meta,para) (T)
- 583. Phenylhydrazine hydrochloride (T)
- 584. *Phenylphenol, Orthozenol, DOWICIDE I (T)
- 585. *Phenyltrichlorosilane (T,R)
- 586. *Phorate, THIMET; O,O-Diethyl-S- [(Ethylthio) methyl] phosphorodithioate (T)
- 587. *Phosfolan, CYOLAN, 2-(Diethoxyphosphinylimino)-1,3-dithiolane (T)
- 588. *Phosgene, Carbonyl chloride (T,R)
- 589. *Phosphamidon, DIMECRON, 2-Chloro-2-diethylcarbamoyl-1-methylvinyl dimethyl phosphate (T)
- 590. *Phosphine, Hydrogen phosphide (T,F)
- 591. Phosphoric acid (C)
- 592. Phosphoric anhydride, Phosphorus pentoxide (C,F)
- 593. Phosphorus (amorphous, red) (T,F,R)
- 594. *Phosphorus (white or yellow) (T,F,R)
- 595. *Phosphorus oxybromide, Phosphoryl bromide (T,C,R)
- 596. *Phosphorus oxychloride, Phosphoryl chloride (T,C,R)
- 597. *Phosphorus pentachloride, Phosphoric chloride (T,C,F,R)
- 598. *Phosphorus pentasulfide, Phosphoric sulfide (T,C,F,R)
- 599. *Phosphorus sesquisulfide, Tetraphosphorus trisulfide (T,C,F,R)
- 600. *Phosphorus tribromide (T,C,R)
- 601. *Phosphorus trichloride (T,C,R)
- 602. Picramide, Trinitroaniline (T,R)
- 603. Picric acid, Trinitrophenol (T,R)
- 604. Picryl chloride, 2-Chloro-1,3,5-trinitrobenzene (T,R)
- 605. *Platinum compounds (T)
- 606. *Polychlorinated biphenyls, PCB, Askarel, AROCLOR, CHLOREX-TOL, INERTEEN, PYRANOL (T)

- 607. Polyvinyl nitrate (F,R)
- 608. POTASAN; O,O-Diethyl-O-(4-methylumbelliferone) phosphorothioate (T)
- 609. *Potassium (C,F,R)
- 610. *Potassium arsenate (T)
- 611. *Potassium arsenite (T)
- 612. *Potassium bifluoride, Potassium acid fluoride (T,C)
- 613. Potassium binoxalate, Potassium acid oxalate (T)
- 614. Potassium bromate (T,F)
- 615. *Potassium cyanide (T)
- 616. Potassium dichloroisocyanurate (T,F)
- 617. Potassium dichromate, Potassium bichromate (T,C,F)
- 619. Potassium fluoride (T)
- 620.* Potassium hydride (C,F,R)
- 621. Potassium hydroxide, Caustic potash (T,C)
- 622. Potassium nitrate, Saltpeter (F,R)
- 623. Potassium nitrite (F,R)
- 624. Potassium oxalate (T)
- 625. Potassium perchlorate (T,F,R)
- 626. Potassium permanganate (T,C,F)
- 627. Potassium peroxide (C,F,R)
- 628. Potassium sulfide (T,F)
- 629. *Propargyl bromide, 3-Bromo-1-propyne (T,F)
- 630. *beta-Propiolactone, BPL (T)
- 631. Propionaldehyde, Propanal (T,F)
- 632. Propionic acid, Propanoic acid (T,C,F)
- 633. n-Propyl acetate (T,F)
- 634. n-Propyl alcohol, 1-Propanol (T,F)
- 635. n-Propylamine (and isomers) (T,F)
- 636. *Propyleneimine, 2-Methylaziridine (T,F)
- 637. Propylene oxide (T,F)
- 638. n-Propyl formate (T,F)
- 639. n-Propyl mercaptan, 1-Propanethiol (T,F)
- 640. *n-Propyltrichlorosilane (T,C,F,R)
- 641. *Prothoate, FOSTION, FAC; O,O-Diethyl-S-carboethoxyethyl phosphorodithioate (T)
- 642. Pyridine (T,F)
- 643. *Pyrosulfuryl chloride, Disulfuryl chloride (T,C,R)
- 644. *Quinone; 1,4-Benzoquinone (T)
- 645. Raney nickel (F)
- 646. *Schradan, Octamethyl pyrophosphoramide, OMPA (T)
- 647A. *Selenium (T)
- 647B. *Selenium compounds (T)
- 648. *Selenium fluoride (T)
- 649. *Selenous acid, Selenious acid and salts (T)
- 650. *Silicon tetrachloride, Silicon chloride (T,C,R)
- 651. *Silver acetylide (T,R)
- 652. Silver azide (T,R)
- 653. Silver compounds (T)

- 654. Silver nitrate (T)
- 655. Silver styphnate, Silver trinitroresorcinate (T,R)
- 656. Silver tetrazene (T,R)
- 657. *Sodium (C,F,R)
- 658. Sodium aluminate (C)
- 659. *Sodium aluminum hydride (C,F,R)
- 660. *Sodium amide, Sodamide (C,F,R)
- 661. *Sodium arsenate (T)
- 662. *Sodium arsenite (T)
- 663. Sodium azide (T,R)
- 664. *Sodium bifluoride, Sodium acid fluoride (T,C)
- 665. Sodium bromate (T,F)
- 666. *Sodium cacodylate, Sodium dimethylarsenate (T)
- 667. Sodium carbonate peroxide (F)
- 668. Sodium chlorate (T,F)
- 669. Sodium chlorite (T,F)
- 670. Sodium chromate (T,C)
- 671. *Sodium cyanide (T)
- 672. Sodium dichloroisocyanurate (F)
- 673. Sodium dichromate, Sodium bichromate (T,C,F)
- 674. Sodium fluoride (T)
- 675. *Sodium hydride (T,C,F,R)
- 676. Sodium hydrosulfite, Sodium hyposulfite (F)
- 677. Sodium hydroxide, Caustic soda, Lye (T,C)
- 678. *Sodium hypochlorite (T,F,R)
- 679. *Sodium methylete, Sodium methoxide (C,F,R)
- 680. Sodium molybdate (T)
- 681. Sodium nitrate, Soda niter (T,F,R)
- 682. Sodium nitrite (T,F,R)
- 683. Sodium oxide, Sodium monoxide (T,C)
- 684. Sodium perchlorate (T,F,R)
- 685. Sodium permanganate (T,F)
- 686. *Sodium peroxide (T,F,R)
- 687. Sodium picramate (T,F,R)
- 688. *Sodium potassium alloy, NaK,NaK (C,F,R)
- 689. *Sodium selenate (T)
- 690. Sodium sulfide, Sodium hydrosulfide (T,F)
- 691. Sodium thiocyanate, Sodium sulfocyanate (T)
- 692. Stannic chloride, Tin tetrachloride (T,C)
- 693. *Strontium arsenate (T)
- 694. Strontium nitrate (T,F,R)
- 695. Strontium peroxide, Strontium dioxide (F,R)
- 696. *Strychnine and salts (T)
- 697. Styrene, Vinylbenzene (T,F)
- 698. Succinic acid peroxide (T,F)
- 699. Sulfide salts (soluble) (T)
- 700. *Sulfotepp, DITHIONE, BLADAFUM, Tetraethyl dithiopyrophosphate, TEDP (T)
- 701. *Sulfur chloride, Sulfur monochloride (T,C,R)

- 702. *Sulfur mustard (T,C,R)
- 703. *Sulfur pentafluoride (T,C)
- 704. Sulfur trioxide, Sulfuric anhydride (T,C,F)
- 705. Sulfuric acid, Oil of vitriol, Battery acid (T,C)
- 706. Sulfurous acid (T,C)
- 707. *Sulfuryl chloride, Sulfonyl chloride (T,C,R)
- 708. *Sulfuryl fluoride, Sulfonyl fluoride (T,C,R)
- 709. *SUPRACIDE, ULTRACIDE, S-[(5-Methoxy-2-oxo-1,3,4-thiadiazol-3(2H)-yl) methyl] -O,O-dimethyl phosphorodithioate (T)
- 710. *SURECIDE, Cyanophenphos, O-para-Cyanophenyl-O-ethyl phenyl phosphonothioate (T)
- 711. *Tellurium hexafluoride (T,C)
- 712. *TELODRIN, Isobenzan; 1,3,4,5,6,7,8,8-Octachloro-1,3,3a,4,7,7a-hexahydro-4,7-methanoisobenzofuran (T)
- 713. *TEMIK, Aldicarb, 2-Methyl-2(methylthio) propionaldehyde-O-(methylcarbamoyl) oxime (T)
- 714. *2,3,7,8-Tetrachlorodibenzo-para-dioxin, TCDD, Dioxin (T)
- 715. sym-Tetrachloroethane (T)
- 717. *Tetraethyl lead, TEL (and other organic lead) (T,F)
- 718. *Tetraethyl pyrophosphate, TEPP (T)
- 719A. Tetrahydrofuran, THF (T,F)
- 719B. Tetrahydrophthalic anhydride, Memtetrahydrophthalic anhydride (T)
- 720. TETRALIN, Tetrahydronaphthalene (T)
- 721. Tetramethyl lead, TML (T,F)
- 722. *Tetramethyl succinonitrile (T)
- 723. *Tetranitromethane (T,F,R)
- 724. *Tetrasul, ANIMERT V-101, S-para-Chlorophenyl-2,4,5-trichlorophenyl sulfide (T)
- 725. Tetrazene, 4-Amidino-1-(nitrosamino-amidino)-1-tetrazene (T,R)
- 726. *Thallium (T)
- 727. *Thallium compounds (T)
- 728. *Thalious sulfate, Thallium sulfate, RATOX (T)
- 729. *Thiocarbonylchloride, Thiophosgene (T,C,R)
- 730. *Thionazin, ZINOPHOS; O,O-Tetramethylthiuram monosulfide (T)
- 731. *Thionyl chloride, Sulfur oxychloride (T,C,R)
- 732. *Thiophosphoryl chloride (T,C,R)
- 733. Thorium (powder) (F)
- 734. Tin compounds (organic) (T)
- 735. Titanium (powder) (F)
- 736. Titanium sulfate (T)
- 737. *Titanium tetrachloride, Titanic chloride (T,C,R)
- 738. Toluene, Methylbenzene (T,F)
- 739. *Toluene-2,4-diisocyanate, TDI (T,R)
- 740A. Toluidine, Aminotoluene (ortho,meta,para) (T)
- 740B. *Toxaphene, Polychlorocamphene (T)
- 741. *TRANID, exo-3-Chloro-endo-6-cyano-2-norbornanone-O-(methylcarbamoyl) oxime (T)
- 743. 1,1,2-Trichloroethane (T)

- 744. Trichloroethylene; Trichlorethene (T)
- 745. Trichloroisocyanuric acid (T,I,F)
- 746. *2,4,5-Trichlorophenoxyacetic acid; 2,4,5-T (T)
- 747. *Trichlorosilane, Silicochloroform (T,C,F,R)
- 748. Trimethylamine, TMA (T,F)
- 749. Trinitroanisole; 2,4,6-Trinitrophenyl methyl ether (T,R)
- 750. 1,3,5-Trinitrobenzene, TNB (T,R)
- 751. 2,4,6-Trinitrobenzoic acid (T,R)
- 752. Trinitronaphthalene, Naphtite (T,R)
- 753. 2,4,6-Trinitroresorcinol, Styphnic acid (T,R)
- 754. 2,4,6-Trinitrotoluene, TNT (T,F,R)
- 755. *tris(1-Aziridinyl) phosphine oxide, Triethylenephosphoramidate, TEPA (T)
- 756. Tungstic acid and salts (T)
- 757. Turpentine (T,F)
- 758. Uranyl nitrate, Uranium nitrate (T,F,R)
- 759. Urea nitrate (T,F,R)
- 760. n-Valeraldehyde, n-Pentanal (and isomers) (T,F)
- 761. Vanadic acid salts (T)
- 762. Vanadium oxytrichloride (T,C)
- 763. *Vanadium pentoxide, Vanadic acid anhydride (T)
- 764. Vanadium tetrachloride (T,C)
- 765. Vanadium tetraoxide (T)
- 766. Vanadium trioxide, Vanadium sesquioxide (T)
- 767. Vanadyl sulfate, Vanadium sulfate (T)
- 768. Vinyl acetate (F,T)
- 769. *Vinyl chloride (T,F)
- 770. Vinyl ethyl ether (F)
- 771. Vinylidene chloride, VC (T,F)
- 772. Vinyl isopropyl ether (F)
- 773. *Vinyltrichlorosilane (T,C,F,R)
- 774. VX, O-Ethyl methyl phosphoryl N,N-diisopropyl thiocholine (T)
- 775. *WEPSYN 155, WP 155, Triamiphos, para-(5-Amino-3-phenyl-1H-1,2,4-triazol-1-yl)-N,N,N',N'-tetramethyl phosphonic diamide (T)
- 776. Xylene, Dimethylbenzene (ortho,meta,para) (T,F)
- 777. Zinc (powder) (F)
- 778. Zinc ammonium nitrate (T,F)
- 779. *Zinc arsenate (T)
- 780. *Zinc arsenite (T)
- 781. Zinc chloride (T,C)
- 782. Zinc compounds (T)
- 783. *Zinc cyanide (T)
- 784. Zinc nitrate (T,F,R)
- 785. Zinc permanganate (T,F)
- 786. Zinc peroxide, Zinc dioxide (T,F,R)
- 787. *Zinc phosphide (T,F,R)
- 788. Zinc sulfate (T)
- 789. Zirconium (powder) (F)
- 790. *Zirconium chloride, Zirconium tetrachloride (T,C,R)
- 791. Zirconium picramate (F)

(e) List of Common Names. In this subsection a dagger denotes the common name of a waste which comes under the provisions of this chapter if it contains a hazardous material.

- Acetylene sludge (C)
- Acid and water (C)
- Acid sludge (C)
- AFU Flocc (T)
- Alkaline caustic liquids (C)
- Alkaline cleaner (C)
- Alkaline corrosive battery fluid (C)
- Alkaline corrosive liquids (C)
- Asbestos waste (T)
- Ashes (T,C)
- Bag house wastes†
- Battery acid (C)
- Beryllium waste (T)
- Bilge water (T)
- Boiler cleaning waste (T,C)
- Bunker Oil (T,F)
- Catalyst†
- Caustic sludge (C)
- Caustic wastewater (C)
- Chemical cleaners†
- Chemical toilet waste†
- Cleaning solvents (F)
- Corrosion inhibitor (T,C)
- Data processing fluid (F)
- Drilling fluids†
- Drilling mud†
- Dyes†
- Etching acid liquid or solvent (C,F)
- Fly ash (T,C)
- Fuel waste (T,F)
- Insecticides (T)
- Laboratory waste†
- Lime and sulfur sludge (C)
- Lime and water (C)
- Lime sludge (C)
- Lime wastewater (C)
- Liquid cement†
- Liquid cleaning compounds†
- Mine tailings†
- Obsolete explosives (R)
- Oil and water (T)
- Oil Ash (T,C)
- Paint (or varnish) remover or stripper (F)
- Paint thinner (T,F)
- Paint waste (or slops) (T,F)

Pickling liquor (C)
Pigments†
Plating waste (T,C)
Printing Ink†
Retrograde explosives (R)
Sludge acid (C)
Soda ash (C)
Solvents (F)
Spent acid (C)
Spent caustic (C)
Spent (or waste) cyanide solutions (T,C)
Spent mixed acid (C)
Spent plating solution (T,C)
Spent sulfuric acid (C)
Stripping solution (T,F)
Sulfonation oil (F)
Tank bottom sediment†
Tank cleaning sludges†
Tanning sludges (T)
Toxic chemical toilet wastes (T)
Unrinsed pesticide containers (T)
Unwanted or waste pesticides—an unusable portion of active ingredient or undiluted formulation (T)
Waste chemicals†
Waste expoxides†
Waste (or slop) oil (T)
Weed Killer (T)

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Sections 25140 and 25141, Health and Safety Code.

HISTORY:

1. Amendment filed 9-27-84; effective thirtieth day thereafter (Register 84, No. 41).
2. Editorial correction of subsection (d) and NOTE filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41)

Article 10. Extremely Hazardous Wastes and Extremely Hazardous Materials

66685. List of Extremely Hazardous Wastes.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Repealer of Article 10 (Section 66685) filed 9-27-84; effective thirtieth day thereafter (Register 84, No. 41).

ATTACHMENT C

HAZARDOUS MATERIALS

IN

EPA'S CONSOLIDATED LIST OF CHEMICALS
SUBJECT TO REPORTING REQUIREMENTS OF

TITLE III OF SUPERFUND

(Dated July 1987)

**EPA'S CONSOLIDATED LIST OF CHEMICALS
SUBJECT TO REPORTING REQUIREMENTS OF TITLE III OF SUPERFUND
(Dated July 1987)**

This consolidated chemical list includes chemicals subject to reporting requirements under Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).^{*} It has been prepared to help firms handling chemicals determine whether they need to submit reports under Sections 304 or 313 of Title III and, for a specific chemical, what reports need to be submitted.

The list includes chemicals referenced under four federal statutory provisions, as follows:

-
- * Not specified in this consolidated list are all chemicals subject to the reporting requirements in Section 311 and 312 of SARA Title III. These hazardous chemicals, for which material safety data sheets (MSDS) must be developed under Occupational Safety and Health Act Hazard Communication Standards, are identified as such by broad criteria, rather than by enumeration. There are over 50,000 such substances that satisfy the criteria.

(1) SARA Section 302 Extremely Hazardous Substances, the presence of any of which, in sufficient quantities, requires certain emergency planning activities to be conducted. Releases of these substances are also subject to reporting under Section 304 of Title III. The final rule was published on April 22, 1987 (52 FR 13378).

(2) CERCLA Hazardous Substances ("RQ" Chemicals), releases of which are subject to reporting under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA, or "Superfund"). Such releases are also subject to reporting under Section 304 of Title III. CERCLA hazardous substances, and their reportable quantities, are listed in 40 CFR Part 302, Table 302.4.

(3) SARA Section 313 Toxic Chemicals, emissions or releases of which must be reported annually as part of SARA Title III's community right-to-know provisions. The proposed Section 313 rule containing these chemicals was published on June 4, 1987 (52 FR 21152).

(4) RCRA Hazardous Wastes from the P and U lists only (40 CFR 261.33), which consist of lists of specific chemicals. RCRA hazardous wastes consisting of waste streams on the F and K lists are not included here; such waste streams are also CERCLA hazardous substances. This listing is provided as an indicator to companies that they may already have data on a specific chemical that can be used for Title III reporting purposes.

There are four columns in the consolidated list corresponding to these four statutory provisions. An "X" in one of these four columns indicates that a chemical is subject to reporting requirements under the appropriate statutory provision. A fifth column, headed "State," is left blank, to be checked if state reporting requirements apply to a chemical. The heading "Section 304" over the Section 302 and CERCLA lists indicates that the reporting requirements in Section 304 of SARA Title III apply to Section 302 extremely hazardous substances and CERCLA hazardous substances. As indicated, most chemicals on the consolidated list are subject to reporting requirements under more than one statutory provision.

The chemicals on this list are ordered by Chemical Abstracts Service (CAS) registry number. Categories of chemicals, which do not have CAS registry numbers, but which are cited under CERCLA and Section 313, are placed at the end of the list. The listed chemicals are grouped by fours to facilitate reading.

For additional copies of this document address requests to:

TSCA Assistance Office (TS-799)
Office of Toxic Substances
U.S. Environmental Protection Agency
401 M Street, SW
Washington DC 20460

Phone; (202) 554-1411

SARA
TITLE III
CONSOLIDATED CHEMICAL LIST
5/20/87

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
50-00-0	Formaldehyde	X	X	X	X	
50-07-7	Mitomycin C	X	X		X	

50-14-6	Ergocalciferol	X				
50-18-0	Cyclophosphamide		X		X	
50-29-3	DDT		X		X	
50-32-8	Benzo[a]pyrene		X		X	

50-55-5	Reserpine		X		X	
51-21-8	Fluorouracil	X				
51-28-5	2,4-Dinitrophenol		X	X	X	
51-43-4	1,2-Benzenediol, 4-[1-hydroxy-2-(methylamino)ethyl]-		X		X	

51-75-2	Mechlorethamine	X		X		
51-79-6	Carbamic acid, ethyl ester		X	X	X	
51-83-2	Carbachol chloride	X				
52-68-6	Trichlorophon	X	X	X		

52-85-7	Famphur		X		X	
53-70-3	Dibenz[a,h]anthracene		X		X	
53-86-1	Indomethacin	X				
53-96-3	Acetamide, N-9H-fluoren-2-yl-		X	X	X	

54-11-5	Nicotine	X	X		X	
54-62-6	Aminopterin	X				
55-18-5	Ethanamine, N-ethyl-N-nitroso-		X	X	X	
55-21-0	Benzamide			X		

55-63-0	Nitroglycerine		X	X	X	
55-91-4	Isofluorphate	X	X		X	
56-04-2	Methylthiouracil		X		X	
56-23-5	Carbon tetrachloride		X	X	X	

56-25-7	Cantharidin	X				
56-38-2	Parathion	X	X	X	X	
56-49-5	Benz[j]aceanthrylene, 1,2-dihydro-3-methyl-		X		X	
56-53-1	Diethylstilbestrol		X		X	

56-55-3	Benz[a]anthracene		X		X	
56-72-4	Coumaphos	X	X			
57-12-5	Cyanides (soluble cyanide salts)		X	X	X	
57-14-7	Dimethylhydrazine	X	X	X	X	

57-24-9	Strychnine	X	X		X	
57-47-6	Physostigmine	X				
57-57-8	Propiolactone, beta-	X		X		
57-64-7	Physostigmine, salicylate (1:1)	X				

57-74-9	Chlordane	X	X	X	X	

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
57-97-6	1,2-Benzanthracene, 7,12-dimethyl-		X		X	
58-36-6	Phenoxarsine, 10,10'-oxydi-	X				
58-89-9	Lindane	X	X	X	X	
58-90-2	Phenol, 2,3,4,6-tetrachloro-		X		X	
59-50-7	4-Chloro-m-cresol		X		X	
59-88-1	Phenylhydrazine hydrochloride	X				
59-89-2	N-Nitrosomorpholine			X		
60-00-4	Ethylenediamine tetraacetic acid (EDTA)		X			
60-09-3	4-Aminoazobenzene			X		
60-11-7	Benzenamine, N,N-dimethyl-4-phenylazo-		X	X	X	
60-29-7	Ethane, 1,1'-oxybis-		X		X	
60-34-4	Methylhydrazine	X	X	X	X	
60-35-5	Acetamide			X		
60-41-3	Strychnine, sulfate	X				
60-51-5	Dimethoate	X	X		X	
60-57-1	Dieldrin		X		X	
61-82-5	Amitrole		X		X	
62-38-4	Phenylmercury acetate	X	X		X	
62-44-2	Acetamide, N-(4-ethoxyphenyl)-		X		X	
62-50-0	Ethyl methanesulfonate		X		X	
62-53-3	Aniline	X	X	X	X	
62-55-5	Ethanethioamide		X	X	X	
62-56-6	Carbamide, thio-		X	X	X	
62-73-7	Dichlorvos	X	X	X		
62-74-8	Sodium fluoroacetate	X	X		X	
62-75-9	Nitrosodimethylamine	X	X	X	X	
63-25-2	Carbaryl		X	X		
64-00-6	Phenol, 3-(1-methylethyl)-, methylcarbamate	X				
64-18-8	Formic acid		X		X	
64-19-7	Acetic acid		X			
64-67-5	Diethyl sulfate			X		
64-86-8	Colchicine	X				
65-30-5	Nicotine sulfate	X				
65-85-0	Benzoic acid		X			
65-86-1	Orotic acid	X				
66-75-1	Uracil, 5-[bis(2-chloroethyl)amino]-		X		X	
66-81-9	Cycloheximide	X				
67-56-1	Methanol		X	X	X	
67-63-0	Isopropyl alcohol (mfg.-strong acid processes)			X		
67-64-1	Acetone		X	X	X	
67-66-3	Chloroform	X	X	X	X	
67-72-1	Ethane, 1,1,1,2,2,2-hexachloro-		X	X	X	
68-76-8	Triaziquone			X		

		Section 304				
CAS Number	Chemical Name	§302	CERCLA	§313	RCRA	STATE
70-25-7	Guanidine, N-nitroso-N-methyl-N'-nitro-		X		X	
70-30-4	Hexachlorophene		X		X	
70-69-9	Propiophenone, 4'-amino-	X				
71-36-3	1-Butanol		X	X	X	
71-43-2	Benzene		X	X	X	
71-55-6	Methyl chloroform		X	X	X	
71-63-6	Digitoxin	X				
72-20-8	Endrin	X	X		X	
72-43-5	Ethane, 1,1,1-trichloro-2,2-bis(p-methoxyphenyl)-		X	X	X	
72-54-8	DDD		X		X	
72-55-9	DDE		X			
72-57-1	Trypan blue		X		X	
74-83-9	Methyl bromide	X	X	X	X	
74-85-1	Ethylene			X		
74-87-3	Methane, chloro		X	X	X	
74-88-4	Methane, iodo-		X	X	X	
74-89-5	Monomethylamine		X			
74-90-8	Hydrocyanic acid	X	X	X	X	
74-93-1	Methyl mercaptan	X	X		X	
74-95-3	Methane, dibromo-		X	X	X	
75-00-3	Chloroethane		X	X		
75-01-4	Ethene, chloro-		X	X	X	
75-04-7	Monoethylamine		X			
75-05-8	Acetonitrile		X	X	X	
75-07-0	Acetaldehyde		X	X	X	
75-09-2	Methane, dichloro-		X	X	X	
75-15-0	Carbon disulfide	X	X	X	X	
75-18-3	Dimethyl sulfide	X				
75-20-7	Calcium carbide		X			
75-21-8	Ethylene oxide	X	X	X	X	
75-25-2	Bromoform		X	X	X	
75-27-4	Dichlorobromomethane		X	X		
75-34-3	1,1-Dichloroethane		X		X	
75-35-4	1,1-Dichloroethylene		X	X		
75-36-5	Acetyl chloride		X		X	
75-44-5	Phosgene	X	X	X	X	
75-50-3	Trimethylamine		X			
75-55-8	Propyleneimine	X	X	X	X	
75-56-9	Propylene oxide	X	X	X		
75-60-5	Cacodylic acid		X		X	
75-64-9	tert-Butylamine		X			
75-65-0	tert-Butyl alcohol			X		
75-69-4	Methane, trichlorofluoro-		X		X	

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
75-71-8	Dichlorodifluoromethane		X		X	
75-74-1	Tetramethyl lead	X				

75-77-4	Trimethylchlorosilane	X				
75-78-5	Dimethyldichlorosilane	X				
75-79-6	Methyltrichlorosilane	X				
75-86-5	Acetone cyanohydrin	X	X		X	

75-87-6	Acetaldehyde, trichloro-		X		X	
75-99-0	2,2-Dichloropropionic acid		X			
76-01-7	Pentachloroethane	X	X		X	
76-02-8	Trichloroacetyl chloride	X				

76-13-1	Chlorinated fluorocarbon (Freon 113)			X		
76-44-8	Heptachlor		X	X	X	
77-47-4	Hexachlorocyclopentadiene	X	X	X	X	
77-78-1	Dimethyl sulfate	X	X	X	X	

77-81-6	Tabun	X				
78-00-2	Tetraethyllead	X	X		X	
78-34-2	Dioxathion	X				
78-53-5	Amiton	X				

78-59-1	Isophorone		X			
78-71-7	Oxetane, 3,3-bis(chloromethyl)-	X				
78-79-5	Isoprene		X			
78-81-9	iso-Butylamine		X			

78-82-0	Isobutyronitrile	X				
78-83-1	Isobutyl alcohol		X		X	
78-84-2	Isobutyraldehyde			X		
78-87-5	1,2-Dichloropropane		X	X	X	

78-88-6	2,3-Dichloropropene		X			
78-92-2	sec-Butyl alcohol			X		
78-93-3	2-Butanone		X	X	X	
78-94-4	Methyl vinyl ketone	X				

78-97-7	Lactonitrile	X				
78-99-9	1,1-Dichloropropane		X			
79-00-5	Ethane, 1,1,2-trichloro-		X	X	X	
79-01-6	Trichloroethene		X	X	X	

79-06-1	Acrylamide	X	X	X	X	
79-09-4	Propionic acid		X			
79-10-7	Acrylic acid		X	X		
79-11-8	acetic acid	X		X		

79-19-6	Thiosemicarbazide	X	X		X	
79-21-0	Peracetic acid	X		X		
79-22-1	Methyl chloroformate	X	X		X	
79-31-2	iso-Butyric acid		X			

79-34-5	Ethane, 1,1,2,2-tetrachloro-		X	X	X	

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
79-44-7	Carbamoyl chloride, dimethyl-		X	X	X	
79-46-9	2-Nitropropane		X	X	X	
80-05-7	4,4'-Isopropylidenediphenol			X		
80-15-9	alpha,alpha-Dimethylbenzylhydroperoxide		X	X	X	
80-62-6	Methyl methacrylate		X	X	X	
80-63-7	Methyl 2-chloroacrylate	X				
81-07-2	1,2-Benzisothiazolin-3-one,1,1-dioxide, and salts		X	X	X	
81-81-2	Warfarin	X	X		X	
81-88-9	C.I. Food Red 15			X		
82-28-0	1-Amino-2-methylantraquinone			X		
82-66-6	Diphacinone	X				
82-68-8	Benzene, pentachloronitro-		X	X	X	
83-32-9	Acenaphthene		X			
84-66-2	1,2-Benzenedicarboxylic acid, diethyl ester		X	X	X	
84-74-2	Dibutyl phthalate	X	X	X	X	
84-80-0	Phylloquinone	X				
85-00-7	Diquat		X			
85-01-8	Phenanthrene		X			
85-44-9	1,2-Benzenedicarboxylic acid anhydride		X	X	X	
85-68-7	Butyl benzyl phthalate		X	X		
86-30-6	N-Nitrosodiphenylamine		X	X		
86-50-0	Azinophos-methyl	X	X			
86-73-7	Fluorene		X			
86-78-3	1,3-Butadiene, 1,1,2,3,4,4-hexachloro-		X		X	
86-88-4	Antu	X	X		X	
87-62-7	2,6-Xylidine			X		
87-65-0	2,6-Dichlorophenol		X		X	
87-68-3	Hexachloro-1,3-butadiene			X		
87-86-5	Pentachlorophenol	X	X	X	X	
88-01-9	Aroclor		X			
88-05-1	Aniline, 2,4,6-trimethyl-	X				
88-06-2	Phenol,2,4,6-trichloro		X	X	X	
88-72-2	o-Nitrotoluene		X			
88-75-5	o-Nitrophenol		X	X		
88-85-7	Dinoseb	X	X		X	
88-89-1	Picric acid			X		
90-04-0	o-Anisidine			X		
90-43-7	2-Phenylphenol			X		
90-94-8	Michler's ketone			X		
91-08-7	Toluene 2,6-diisocyanate	X	X	X		
91-20-3	Naphthalene		X	X	X	
91-22-5	Quinoline		X	X		
91-58-7	beta-Chloronaphthalene		X		X	

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
91-59-8	2-Naphthylamine		X	X	X	
91-80-5	Methapyrilene		X		X	

91-94-1	(1,1'-Biphenyl)-4,4'-diamine,3,3'-dichloro-		X	X	X	
92-52-4	Biphenyl			X		
92-67-1	4-Aminobiphenyl			X		
92-87-5	Benzidine		X	X	X	

92-93-3	4-Nitrobiphenyl			X		
93-05-0	Diethyl-p-phenylenediamine	X				
93-72-1	Propionic acid, 2-(2,4,5-trichlorophenoxy)-		X		X	
93-76-5	2,4,5-T		X		X	

93-79-8	2,4,5-T esters		X			
94-11-1	2,4-D Esters		X			
94-36-0	Benzoyl peroxide			X		
94-58-6	Benzene, 1,2-methylenedioxy-4-propyl-		X		X	

94-59-7	Benzene, 1,2-methylenedioxy-4-allyl-		X	X	X	
94-75-7	2,4-D Acid		X	X	X	
94-79-1	2,4-D Esters		X			
94-80-4	2,4-D Esters		X			

95-47-6	Benzene, o-dimethyl-		X	X	X	
95-48-7	Cresylic acid	X	X	X	X	
95-50-1	Benzene, 1,2-dichloro-		X	X	X	
95-53-4	o-Toluidine			X		

95-57-8	2-Chlorophenol		X		X	
95-63-6	Pseudocumene	X		X		
95-80-7	Diaminotoluene		X	X	X	
95-94-3	Benzene, 1,2,4,5-tetrachloro-		X		X	

95-95-4	Phenol, 2,4,5-trichloro-		X	X	X	
96-09-3	Styrene oxide			X		
96-12-8	1,2-Dibromo-3-chloropropane		X	X	X	
96-33-3	Methyl acrylate			X		

96-45-7	Ethylenethiourea		X	X	X	
97-18-7	Phenol, 2,2'-thiobis(4,6-dichloro-	X				
97-56-3	C.I. Solvent Yellow 3			X		
97-63-2	Ethyl methacrylate		X		X	

98-01-1	2-Furancarboxaldehyde		X		X	
98-05-5	Benzenearsonic acid	X				
98-07-7	Benzotrichloride	X	X	X	X	
98-09-9	Benzenesulfonyl chloride	X	X		X	

98-13-5	Trichlorophenylsilane	X				
98-16-8	Benzenamine, 3-(trifluoromethyl)-	X				
98-82-8	Benzene, 1-methylethyl-		X	X	X	
98-86-2	Acetophenone		X		X	

98-87-3	Benzal chloride	X	X	X	X	

CAS Number	Chemical Name	Section 304				
		\$302	CERCLA	\$313	RCRA	STATE
=====						
98-88-4	Benzoyl chloride		X	X		
98-95-3	Nitrobenzene	X	X	X	X	

99-08-1	m-Nitrotoluene		X			
99-35-4	Benzene, 1,3,5-trinitro-		X		X	
99-55-8	Benzenamine, 2-methyl-5-nitro-		X		X	
99-59-2	5-Nitro-o-anisidine			X		

99-65-0	m-Dinitrobenzene		X			
99-98-9	Dimethyl-p-phenylenediamine	X				
99-99-0	p-Nitrotoluene		X			
100-01-6	Benzenamine, 4-nitro-		X		X	

100-02-7	p-Nitrophenol		X	X	X	
100-14-1	Benzene, 1-(chloromethyl)-4-nitro-	X				
100-21-0	Terephthalic acid			X		
100-25-4	p-Dinitrobenzene		X			

100-41-4	Ethylbenzene		X	X		
100-42-5	Styrene		X	X		
100-44-7	Benzyl chloride	X	X	X	X	
100-47-0	Benzonitrile		X			

100-75-4	N-Nitrosopiperidine		X	X	X	
101-14-4	Benzenamine, 4,4'-methylenebis(2-chloro-		X	X	X	
101-55-3	Benzene, 1-bromo-4-phenoxy-		X		X	
101-61-1	4,4'-Methylene bis(N,N-dimethyl) benzenamine			X		

101-68-8	Methylene bis(phenylisocyanate) (MBI)			X		
101-77-9	4,4'-Methylene dianiline			X		
101-80-4	4,4'-Diaminodiphenyl ether			X		
102-36-3	Isocyanic acid, 3,4-dichlorophenyl ester	X				

103-23-1	Bis(2-ethylhexyl) adipate			X		
103-85-5	Phenylthiourea	X	X		X	
104-94-9	p-Anisidine			X		
105-46-4	sec-Butyl acetate		X			

105-67-9	2,4-Dimethylphenol		X	X	X	
106-42-3	Benzene, p-dimethyl-		X	X	X	
106-44-5	p-Cresol		X	X	X	
106-46-7	Benzene, 1,4-dichloro-		X	X	X	

106-47-8	Benzenamine, 4-chloro-		X		X	
106-50-3	p-Phenylenediamine			X		
106-51-4	p-Benzoquinone		X	X	X	
106-88-7	1,2-Butylene oxide			X		

106-89-8	Epichlorohydrin	X	X	X	X	
106-93-4	Ethane, 1,2-dibromo-		X	X	X	
106-96-7	Propargyl bromide	X				
106-99-0	Butadiene	X		X		

107-02-8	Acrolein	X	X	X	X	

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
107-05-1	Allyl chloride		X	X		
107-06-2	1,2-Dichloroethane		X	X	X	
107-07-3	Chloroethanol	X				
107-10-8	1-Propanamine		X		X	
107-11-9	Allylamine	X				
107-12-0	Propionitrile	X	X		X	
107-13-1	Acrylonitrile	X	X	X	X	
107-15-3	Ethylenediamine	X	X			
107-16-4	Formaldehyde cyanohydrin	X				
107-18-6	Allyl alcohol	X	X		X	
107-19-7	Propargyl alcohol		X		X	
107-20-0	Chloroacetaldehyde	X	X		X	
107-21-1	Ethylene glycol			X		
107-30-2	Chloromethyl methyl ether	X	X	X	X	
107-44-8	Sarin	X				
107-49-3	Tepp	X	X		X	
107-92-6	Butyric acid		X			
108-05-4	Vinyl acetate monomer	X	X	X		
108-10-1	Methyl isobutyl ketone		X	X	X	
108-23-6	Isopropyl chloroformate	X				
108-24-7	Acetic anhydride		X			
108-31-6	2,5-Furandione		X	X	X	
108-38-3	Benzene, m-dimethyl-		X	X	X	
108-39-4	m-Cresol		X	X	X	
108-46-3	1,3-Benzenediol		X		X	
108-60-1	Bis(2-chloroisopropyl) ether		X	X	X	
108-67-8	Mesitylene	X				
108-78-1	Melamine			X		
108-88-3	Benzene, methyl-		X	X	X	
108-90-7	Benzene, chloro-		X	X	X	
108-91-8	Cyclohexylamine	X				
108-94-1	Cyclohexanone		X		X	
108-95-2	Phenol	X	X	X	X	
108-98-5	Thiophenol	X	X		X	
109-06-8	2-Picoline		X		X	
109-19-3	Butyl isovalerate	X				
109-61-5	Propyl chloroformate	X				
109-73-9	Butylamine		X			
109-77-3	Malononitrile	X	X		X	
109-86-4	2-Methoxyethanol			X		
109-89-7	Diethylamine		X			
109-99-9	Furan, tetrahydro-		X		X	
110-00-9	Furan	X	X		X	

AS Number	Chemical Name	Section 304					RCRA	STATE
		§302	C	LA	§313			
110-16-7	Maleic acid			X				
110-17-8	Fumaric acid			X				
110-19-0	iso-Butyl acetate			X				
110-57-6	Trans-1,4-dichlorobutene	X						
110-75-8	2-Chloroethyl vinyl ether			X		X		
110-80-5	2-Ethoxyethanol				X			
110-82-7	Benzene, hexahydro-			X	X	X		
110-86-1	Pyridine			X	X	X		
110-89-4	Piperidine	X						
111-34-2	Butyl vinyl ether	X						
111-42-2	Diethanolamine				X			
111-44-4	Dichloroethyl ether	X		X	X	X		
111-54-6	1,2-Ethanedithiolbiscarbamodithioic acid			X		X		
111-69-3	Adiponitrile	X						
111-91-1	Bis(2-chloroethoxy) methane			X		X		
114-26-1	Propoxur				X			
115-02-6	Azaserine			X		X		
115-07-1	Propylene (Propene)				X			
115-21-9	Trichloroethylsilane	X						
115-26-4	Dimefox	X						
115-29-7	Endosulfan	X		X		X		
115-32-2	Kelthane			X	X			
115-90-2	Fensulfothion	X						
116-06-3	Aldicarb	X		X		X		
117-52-2	Coumafuryl	X						
117-79-3	2-Aminoanthraquinone				X			
117-80-6	Dichlone			X				
117-81-7	1,2-Benzenedicarboxylic acid, [bis(2-ethylhexyl)] ester			X	X	X		
117-84-0	Diethyl phthalate	X		X	X	X		
118-74-1	Benzene, hexachloro			X	X	X		
119-38-0	Isopropylmethylpyrazolyl dimethylcarbamate	X						
119-90-4	(1,1'-Biphenyl)-4,4'-diamine,3,3'-dimethoxy-			X	X	X		
119-93-7	(1,1'-Biphenyl)-4,4'-diamine,3,3'-diethyl-			X	X	X		
120-12-7	Anthracene			X	X			
120-58-1	Benzene, 1,2-methylenedioxy-4-propenyl-			X		X		
120-71-8	p-Cresidine				X			
120-80-9	Catechol				X			
120-82-1	1,2,4-Trichlorobenzene			X	X			
120-83-2	2,4-Dichlorophenol			X	X	X		
121-14-2	Benzene, 1-methyl-2,4-dinitro-			X	X	X		
121-21-1	Pyrethrins			X				
121-29-9	Pyrethrins			X				
121-44-8	Triethylamine			X				

CAS Number	Chemical Name	Section 304				
		\$302	CERCLA	\$313	RCRA	STATE
121-69-7	N,N-Dimethylaniline			X		
121-75-5	Malathion		X			
122-09-8	alpha,alpha-Dimethylphenethylamine		X		X	
122-14-5	Fenitrothion	X				
122-66-7	1,2-Diphenylhydrazine		X	X	X	
123-31-9	Hydroquinone	X		X		
123-33-1	1,2-Dihydro-3,6-pyridazinedione		X		X	
123-38-6	Propionaldehyde			X		
123-62-6	Propionic anhydride		X			
123-63-7	Paraldehyde		X			
123-72-8	Butyraldehyde			X		
123-73-9	Crotonaldehyde	X	X		X	
123-86-4	Butyl acetate		X			
123-91-1	1,4-Diethylene dioxide		X	X	X	
123-92-2	iso-Amyl acetate		X			
124-04-9	Adipic acid		X			
124-40-3	Dimethylamine		X		X	
124-41-4	Sodium methylate		X			
124-48-1	Chlorodibromomethane		X			
124-65-2	Sodium cacodylate	X				
124-87-8	Picrotoxin	X				
126-72-7	1-Propanol, 2,3-dibromo-, phosphate (3:1)		X	X	X	
126-98-7	Methacrylonitrile	X	X		X	
126-99-8	Chloroprene			X		
127-18-4	Ethene, 1,1,2,2-tetrachloro-		X	X	X	
127-82-2	Zinc phenolsulfonate		X			
128-56-3	Sodium anthraquinone-1-sulfonate	X				
128-66-5	C.I. Vat Yellow 4			X		
129-00-0	Pyrene	X	X			
129-06-6	Warfarin sodium	X				
130-15-4	1,4-Naphthalenedione		X		X	
131-11-3	Dimethyl phthalate	X	X	X	X	
131-52-2	Sodium pentachlorophenate	X				
131-74-8	Ammonium picrate		X		X	
131-89-5	4,6-Dinitro-o-cyclohexylphenol		X		X	
132-64-9	Dibenzofuran			X		
133-06-2	Captan		X	X		
133-90-4	Chloramben			X		
134-29-2	o-Anisidine hydrochloride			X		
134-32-7	1-Naphthylamine		X	X	X	
135-20-6	Cupferron			X		
137-26-8	Bis(dimethylthiocarbamoyl)disulfide		X		X	
139-13-9	Nitrilotriacetic acid			X		

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
139-65-1	4,4'-Thiodianiline			X		
140-29-4	Benzyl cyanide	X				
140-76-1	Pyridine, 2-methyl-5-vinyl-	X				
140-88-5	Ethyl acrylate		X	X	X	
141-32-2	Butyl acrylate			X		
141-66-2	Dicrotophos	X				
141-78-6	Acetic acid, ethyl ester		X		X	
142-28-9	1,3-Dichloropropane		X			
142-71-2	Cupric acetate		X			
142-84-7	Dipropylamine		X		X	
143-33-9	Sodium cyanide (Na(CN))	X	X		X	
143-50-0	Kepone		X		X	
144-49-0	Fluoroacetic acid	X				
145-73-3	Endothall		X		X	
148-82-3	Alanine, 3-[p-bis(2-chloroethyl)amino]phenyl-, L-		X		X	
149-74-6	Dichloromethylphenylsilane	X				
151-38-2	Methoxyethylmercuric acetate	X				
151-50-8	Potassium cyanide	X	X		X	
151-56-4	Ethyleneimine	X	X	X	X	
152-16-9	Diphosphoramidate, octamethyl-	X	X		X	
156-10-5	p-Nitrosodiphenylamine			X		
156-60-5	1,2-trans-Dichloroethylene		X		X	
156-62-7	Calcium cyanamide			X		
189-55-9	1,2:7,8-Dibenzopyrene		X		X	
191-24-2	Benzo[ghi]perylene		X			
193-39-5	Indeno(1,2,3-cd)pyrene		X		X	
205-99-2	Benzol[b]fluoranthene		X			
206-44-0	Benzo[j,k]fluorene		X		X	
207-08-9	Benzo[k]fluoranthene		X			
208-96-8	Acenaphthylene		X			
218-01-9	1,2-Benzphenanthrene		X		X	
225-51-4	Benz[clacridine		X		X	
287-92-3	Cyclopentane	X				
297-78-9	Isobenzan	X				
297-97-2	Thionazin	X	X		X	
298-00-0	Parathion-methyl	X	X		X	
298-02-2	Phorate	X	X		X	
298-04-4	Disulfoton	X	X		X	
300-62-9	Amphetamine	X				
300-76-5	Naled		X			
301-04-2	Acetic acid, lead salt		X		X	
302-01-2	Hydrazine	X	X	X	X	
303-34-4	Lasiocarpine		X		X	

Section 304

CAS Number	Chemical Name	§302	CERCLA	§313	RCRA	STATE
305-03-3	Butanoic acid, 4-[bis(2-chloroethyl)amino] benzene-		X		X	
309-00-2	Aldrin	X	X	X	X	
311-45-5	Diethyl-p-nitrophenyl phosphate		X		X	
315-18-4	Hexacarbate	X	X			
316-42-7	Emetine, dihydrochloride	X				
319-84-6	alpha - BHC		X			
319-85-7	beta - BHC		X			
319-86-8	delta - BHC		X			
327-98-0	Trichloronate	X				
329-71-5	2,5-Dinitrophenol		X			
330-54-1	Diuron		X			
333-41-5	Diazinon		X			
334-88-3	Diazomethane			X		
353-42-4	Boron trifluoride compound with methyl ether (1:1)	X				
353-50-4	Carbon oxyfluoride		X		X	
357-57-3	Brucine		X		X	
359-06-8	Fluoroacetyl chloride	X				
371-62-0	Ethylene fluorohydrin	X				
379-79-3	Ergotamine tartrate	X				
460-19-5	Cyanogen		X		X	
463-58-1	Carbonyl sulfide			X		
465-73-6	Isodrin	X	X		X	
470-90-6	Chlorfenvinfos	X				
492-80-8	Auramine		X	X	X	
494-03-1	Chlornaphazine		X		X	
496-72-0	Diaminotoluene		X			
502-39-6	Methylmercuric dicyanamide	X				
504-24-5	Pyridine, 4-amino-	X	X		X	
504-60-9	1-Methylbutadiene		X		X	
505-60-2	Mustard gas	X		X		
506-61-6	Potassium silver cyanide	X	X		X	
506-64-9	Silver cyanide		X		X	
506-68-3	Cyanogen bromide	X	X		X	
506-77-4	Chlorine cyanide		X		X	
506-78-5	Cyanogen iodide	X				
506-87-6	Ammonium carbonate		X			
506-96-7	Acetyl bromide		X			
509-14-8	Tetranitromethane	X	X		X	
510-15-6	Ethyl 4,4'-dichlorobenzilate		X	X	X	
513-49-5	sec-Butylamine		X			
514-73-8	Dithiazanine iodide	X				
528-29-0	o-Dinitrobenzene		X			
532-27-4	2-Chloroacetophenone			X		

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
534-07-6	Bis(chloromethyl) ketone	X				
534-52-1	Dinitrocresol	X	X	X	X	
535-89-7	Crimidine	X				
538-07-8	Ethylbis(2-chloroethyl)amine	X				
540-59-0	1,2-Dichloroethylene			X		
540-73-8	1,2-Dimethylhydrazine		X		X	
540-88-5	tert-Butyl acetate		X			
541-09-3	Uranyl acetate		X			
541-25-3	Lewisite	X				
541-41-3	Ethyl chloroformate			X		
541-53-7	Dithiobiuret	X	X		X	
541-73-1	Benzene, 1,3-dichloro-		X	X	X	
542-62-1	Barium cyanide		X		X	
542-75-6	1,3-Dichloropropene		X	X	X	
542-76-7	Propionitrile, 3-chloro-	X	X		X	
542-88-1	Chloromethyl ether	X	X	X	X	
542-90-5	Ethyl thiocyanate	X				
543-90-8	Cadmium acetate		X			
544-18-3	Cobaltous formate		X			
544-92-3	Copper cyanide		X		X	
554-84-7	m-Nitrophenol		X			
555-77-1	Tris(2-chloroethyl)amine	X				
556-61-6	Methyl isothiocyanate	X				
556-64-9	Methyl thiocyanate	X				
557-19-7	Nickel cyanide		X		X	
557-21-1	Zinc cyanide		X		X	
557-34-6	Zinc acetate		X			
557-41-5	Zinc formate		X			
558-25-8	Methanesulfonyl fluoride	X				
563-12-2	Ethion	X	X			
563-41-7	Semicarbazide hydrochloride	X				
563-68-8	Acetic acid, thallium(I) salt		X		X	
569-64-2	C.I. Basic Green 4			X		
573-56-8	2,6-Dinitrophenol		X			
584-84-9	Toluene 2,4-diisocyanate	X	X	X		
591-08-2	Acetamide, N-(aminothioxomethyl)-		X		X	
592-01-8	Calcium cyanide		X		X	
592-04-1	Mercuric cyanide		X			
592-85-8	Mercuric thiocyanate		X			
592-87-0	Lead thiocyanate		X			
593-60-2	Vinyl bromide			X		
594-42-3	Perchloromethylmercaptan	X	X		X	
597-64-8	Tetraethyltin	X				

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
598-31-2	Bromoacetone		X		X	
606-20-2	Benzene, 1-methyl-2,6-dinitro-		X	X	X	

608-93-5	Benzene, pentachloro-		X		X	
609-19-8	3,4,5-Trichlorophenol		X			
610-39-9	3,4-Dinitrotoluene		X			
614-78-8	Thiourea, (2-methylphenyl)-	X				

615-05-4	2,4-Diaminoanisole			X		
615-53-2	Carbamic acid, methylnitroso-,ethyl ester		X		X	
621-64-7	Di-n-propylnitrosamine		X	X	X	
624-83-9	Methyl isocyanate	X	X	X	X	

624-92-0	Methyl disulfide	X				
625-16-1	tert-Amyl acetate		X			
625-55-8	Isopropyl formate	X				
626-38-0	sec-Amyl acetate		X			

627-11-2	Chloroethyl chloroformate	X				
628-63-7	Amyl acetate		X			
628-86-4	Fulminic acid, mercury(II)salt		X		X	
630-10-4	Carbamimidoselenoic acid		X		X	

630-20-6	Ethane, 1,1,1,2-tetrachloro-		X		X	
630-60-4	Ouabain	X				
631-61-8	Ammonium acetate		X			
633-03-4	C.I. Basic Green 1	X				

636-21-5	Benzenamine, 2-methyl-, hydrochloride		X	X	X	
639-58-7	Triphenyltin chloride	X				
640-15-3	Thiometon	X				
640-19-7	Fluoroacetamide	X	X		X	

644-64-4	Dimetilan	X				
646-06-0	Dioxolane	X				
675-14-9	Cyanuric fluoride	X				
676-97-1	Methyl phosphonic dichloride	X				

680-31-9	Hexamethylphosphoramide			X		
684-93-5	Carbamide, N-methyl-N-nitroso-		X	X	X	
692-42-2	Arsine, diethyl-		X		X	
696-28-6	Phenyl dichloroarsine	X	X		X	

732-11-6	Phosmet	X				
757-58-4	Hexaethyl tetraphosphate		X		X	
759-73-9	Carbamide, N-ethyl-N-nitroso-		X	X	X	
760-93-0	Methacrylic anhydride	X				

764-41-0	2-Butene, 1,4-dichloro-		X		X	
765-33-4	Glycidylaldehyde		X		X	
786-19-6	Carbophenothion	X				
814-49-3	Diethyl chlorophosphate	X				

814-68-6	Acrylyl chloride	X				

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
815-82-7	Cupric tartrate		X			
823-40-5	Diaminotoluene		X		X	

824-11-3	Trimethylolpropane phosphite	X				
842-07-9	C.I. Solvent Yellow 14			X		
900-95-8	Stannane, acetoxytriphenyl-	X				
919-86-8	Demeton-S-methyl	X				

920-46-7	Methacryloyl chloride	X				
924-16-3	1-Butanamine, N-butyl-N-nitroso-		X	X	X	
930-55-2	N-Nitrosopyrrolidine		X		X	
933-75-5	2,3,6-Trichlorophenol		X			

933-78-8	2,3,5-Trichlorophenol		X			
944-22-9	Fonofos	X				
947-02-4	Phosfolan	X				
950-10-7	Mephosfolan	X				

950-37-8	Methidathion	X				
959-98-8	alpha - Endosulfan		X			
961-11-5	Tetrachlorvinphos			X		
989-38-8	C.I. Basic Red 1			X		

991-42-4	Norbormide	X				
998-30-1	Triethoxysilane	X				
999-81-5	Chlormequat chloride	X				
1024-57-3	Heptachlor epoxide		X			

1031-07-8	Endosulfan sulfate		X			
1031-47-6	Triamiphos	X				
1066-30-4	Chromic acetate		X			
1066-33-7	Ammonium bicarbonate		X			

1066-45-1	Trimethyltin chloride	X				
1072-35-1	Lead stearate		X			
1111-78-0	Ammonium carbamate		X			
1116-54-7	Ethanol, 2,2'-(nitrosoimino)bis-		X		X	

1120-71-4	1,2-Oxathiolane, 2,2-dioxide		X	X	X	
1122-60-7	Nitrocyclohexane	X				
1124-33-0	Pyridine, 4-nitro-, 1-oxide	X				
1129-41-5	Metolcarb	X				

1163-19-5	Decabromodiphenyl oxide			X		
1185-57-5	Ferric ammonium citrate		X			
1194-65-6	Dichlobenil		X			
1300-71-6	Xylenol		X			

1303-28-2	Arsenic pentoxide	X	X		X	
1303-32-8	Arsenic disulfide		X			
1303-33-9	Arsenic trisulfide		X			
1306-19-0	Cadmium oxide	X				

1309-64-4	Antimony trioxide		X			

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
1310-58-3	Potassium hydroxide		X			
1310-73-2	Sodium hydroxide		X	X		

1313-27-5	Molybdenum trioxide			X		
1314-20-1	Thorium dioxide			X		
1314-32-5	Thallic oxide	X	X		X	
1314-56-3	Phosphorus pentoxide	X				

1314-62-1	Vanadium pentoxide	X	X		X	
1314-80-3	Phosphorus pentasulfide		X		X	
1314-84-7	Zinc phosphide	X	X		X	
1314-87-0	Lead sulfide		X			

1314-96-1	Strontium sulfide		X		X	
1319-72-8	2,4,5-T amines		X			
1319-77-3	Cresol(s)		X	X	X	
1320-18-9	2,4-D Esters		X			

1321-12-6	Nitrotoluene		X			
1327-52-2	Arsenic acid		X		X	
1327-53-3	Arsenous oxide	X	X		X	
1330-20-7	Benzene, dimethyl-		X	X	X	

1331-17-5	Propylene glycol, allyl ether	X				
1332-07-5	Zinc borate		X			
1332-21--	Asbestos		X	X		
1333-83-1	Sodium bifluoride		X			

1335-32-6	Lead subacetate		X		X	
1335-87-1	Hexachloronaphthalene	X		X		
1336-21-6	Ammonium hydroxide		X			
1336-36-3	POLYCHLORINATED BIPHENYLS (PCBs)		X	X		

1338-23-4	2-Butanone peroxide		X		X	
1338-24-5	Naphthenic acid		X			
1341-49-7	Ammonium bifluoride		X			
1344-28-1	Aluminum oxide			X		

1397-94-0	Antimycin A	X				
1405-87-4	Bacitracin	X				
1420-07-1	Dinoterb	X				
1464-53-5	Diepoxybutane	X	X	X	X	

1558-25-4	Trichloro(chloromethyl)silane	X				
1563-66-2	Carbofuran	X	X			
1582-09-8	Trifluralin			X		
1600-27-7	Mercuric acetate	X				

1615-80-1	N,N'-Diethylhydrazine		X		X	
1622-32-8	Ethanesulfonyl chloride, 2-chloro-	X				
1634-04-4	Methyl tert-butyl ether			X		
1642-54-2	Diethylcarbamazine citrate	X				

1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD)		X			

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
=====						
1752-30-3	Acetone thiosemicarbazide	X				
1762-95-4	Ammonium thiocyanate		X			

1836-75-5	Nitrofen			X		
1863-63-4	Ammonium benzoate		X			
1888-71-7	Hexachloropropene		X		X	
1897-45-6	Chlorothalonil			X		

1910-42-5	Paraquat	X				
1918-00-9	Dicamba		X			
1928-38-7	2,4-D Esters		X			
1928-47-8	2,4,5-T esters		X			

1928-61-6	2,4-D Esters		X			
1929-73-3	2,4-D-Esters		X			
1937-37-7	Direct Black 38			X		
1982-47-4	Chloroxuron	X				

2001-95-8	Valinomycin	X				
2008-46-0	2,4,5-T amines		X			
2032-65-7	Methiocarb	X	X			
2074-50-2	Paraquat methosulfate	X				

2097-19-0	Phenylsilatrane	X				
2104-64-5	EPN	X				
2164-17-2	Fluometuron			X		
2223-93-0	Cadmium stearate	X				

2231-57-4	Thiocarbazine	X				
2234-13-1	Octachloronaphthalene			X		
2235-25-8	Ethylmercuric phosphate	X				
2238-07-5	Diglycidyl ether	X				

2244-16-8	Carvone	X				
2275-18-5	Prothoate	X				
2303-16-4	Diallate		X	X	X	
2312-35-8	Propargite		X			

2497-07-6	Oxydisulfoton	X				
2524-03-0	Dimethyl phosphorochloridothioate	X				
2540-82-1	Formothion	X				
2545-59-7	2,4,5-T esters		X			

2570-26-5	Pentadecylamine	X				
2587-90-8	Phosphorothioic acid, O,O-dimethyl-	X				
2602-46-2	Direct Blue 6			X		
2631-37-0	Promecarb	X				

2636-26-2	Cyanophos	X				
2642-71-9	Azinphos-ethyl	X				
2650-18-2	C.I. Acid Blue 9, diammonium salt			X		
2665-30-7	Phosphonothioic acid, methyl-,O-(4-nitrophenyl) O-phenyl est	X				

2703-13-1	Phosphonothioic acid, methyl-, O-ethyl O-(4-(methylthio)phen	X				

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
2757-18-8	Thallous malonate	X				
2763-96-4	Muscimol	X	X		X	
2764-72-9	Diquat		X			
2778-04-3	Endothion	X				
2832-40-8	C.I. Disperse Yellow 3			X		
2921-88-2	Chlorpyrifos		X			
2944-67-4	Ferric ammonium oxalate		X			
2971-38-2	2,4-D Esters		X			
3012-65-5	Ammonium citrate, dibasic		X			
3037-72-7	Silane, (4-aminobutyl)diethoxymethyl-	X				
3048-64-4	Vinylnorbornene	X				
3118-97-6	C.I. Solvent Orange 7			X		
3164-29-2	Ammonium tartrate		X			
3165-93-3	Benzenamine, 4-chloro-2-methyl-,hydrochloride		X		X	
3251-23-8	Cupric nitrate		X			
3254-63-5	Phosphoric acid, dimethyl 4-(methylthio) phenyl ester	X				
3288-58-2	O,O-Diethyl S-methyl dithiophosphate		X		X	
3486-35-9	Zinc carbonate		X			
3569-57-1	Sulfoxide, 3-chloropropyl octyl	X				
3615-21-2	Benzimidazole, 4,5-dichloro-2-(trifluoromethyl)-	X				
3689-24-5	Sulfotep	X	X		X	
3691-35-8	Chlorophacinone	X				
3734-97-2	Amiton oxalate	X				
3735-23-7	Methyl phenkapton	X				
3761-53-3	C.I. Food Red 5			X		
3813-14-7	2,4,5-T amines		X			
3844-45-9	C.I. Acid Blue 9, disodium salt			X		
3878-19-1	Fuberidazole	X				
4044-65-9	Bitoscanate	X				
4098-71-9	Isophorone diisocyanate	X				
4104-14-7	Phosacetim	X				
4170-30-3	Crotonaldehyde	X	X		X	
4301-50-2	Fluometil	X				
4418-66-0	Phenol, 2,2'-thiobis(4-chloro-6-methyl-	X				
4549-40-0	Ethenamine, N-methyl-N-nitroso-		X	X	X	
4680-78-8	C.I. Acid Green 3			X		
4835-11-4	Hexamethylenediamine, N,N'-dibutyl-	X				
5281-13-0	Piprotal	X				
5344-82-1	Thiourea, (2-chlorophenyl)-	X	X		X	
5836-29-3	Coumatetralyl	X				
5893-66-3	Cupric oxalate		X			
5972-73-6	Ammonium oxalate		X			
6009-70-7	Ammonium oxalate		X			

CAS Number	Chemical Name	Section 304				
		§302	CERCLA	§313	RCRA	STATE
6369-96-6	2,4,5-T amines		X			
6369-97-7	2,4,5-T amines		X			
6484-52-2	Ammonium nitrate (solution)			X		
6533-73-9	Thallous carbonate	X	X		X	
6923-22-4	Monocrotophos	X				
7005-72-3	4-Chlorophenyl phenyl ether		X			
7421-93-4	Endrin aldehyde		X			
7428-48-0	Lead stearate		X			
7429-90-5	Aluminum (fume or dust)			X		
7439-92-1	Lead		X	X	X	
7439-96-5	Manganese and compounds			X		
7439-97-6	Mercury		X	X	X	
7440-02-0	Nickel	X	X	X		
7440-22-4	Silver		X	X	X	
7440-23-5	Sodium		X			
7440-29-0	Thallium		X	X		
7440-36-0	Antimony		X	X		
7440-38-2	Arsenic		X	X	X	
7440-39-3	Barium and compounds			X	X	
7440-41-7	Beryllium		X	X	X	
7440-43-9	Cadmium		X	X	X	
7440-47-3	Chromium		X	X	X	
7440-48-4	Cobalt	X		X		
7440-50-8	Copper		X	X		
7440-62-2	Vanadium (fume or dust)			X		
7440-66-6	Zinc		X	X		
7446-08-4	Selenium dioxide		X		X	
7446-09-5	Sulfur dioxide	X				
7446-11-9	Sulfur trioxide	X				
7446-14-2	Lead sulfate		X			
7446-18-6	Thallous sulfate	X	X		X	
7446-27-7	Lead phosphate		X		X	
7447-39-4	Cupric chloride		X			
7487-94-7	Mercuric chloride	X				
7488-56-4	Selenium disulfide		X		X	
7550-45-0	Titanium tetrachloride	X		X		
7558-79-4	Sodium phosphate, dibasic		X			
7580-67-8	Lithium hydride	X				
7601-54-9	Sodium phosphate, tribasic		X			
7631-89-2	Sodium arsenate	X	X			
7631-90-5	Sodium bisulfite		X			
7632-00-0	Sodium nitrite		X			
7637-07-2	Boron trifluoride	X				

Section 304

CAS Number	Chemical Name	§302	CERCLA	§313	RCRA	STATE
7645-25-2	Lead arsenate		X			
7646-85-7	Zinc chloride		X			
7647-01-0	Hydrochloric acid	X	X	X		
7647-18-9	Antimony pentachloride		X			
7664-38-2	Phosphoric acid		X	X		
7664-39-3	Hydrogen fluoride	X	X	X	X	
7664-41-7	Ammonia	X	X	X		
7664-93-9	Sulfuric acid	X	X	X		
7681-49-4	Sodium fluoride		X			
7681-52-9	Sodium hypochlorite		X			
7697-37-2	Nitric acid	X	X	X		
7699-45-8	Zinc bromide		X			
7705-08-0	Ferric chloride		X			
7718-54-9	Nickel chloride		X			
7719-12-2	Phosphorous trichloride	X	X			
7720-78-7	Ferrous sulfate		X			
7722-64-7	Potassium permanganate		X			
7722-84-1	Hydrogen peroxide	X				
7723-14-0	Phosphorus	X	X	X		
7726-95-6	Bromine	X				
7733-02-0	Zinc sulfate		X			
7738-94-5	Chromic acid		X			
7757-82-6	Sodium sulfate (solution)			X		
7758-29-4	Sodium phosphate, tribasic		X			
7758-94-3	Ferrous chloride		X			
7758-95-4	Lead chloride		X			
7758-98-7	Cupric sulfate		X			
7761-88-8	Silver nitrate		X			
7773-06-0	Ammonium sulfamate		X			
7775-11-3	Sodium chromate		X			
7778-39-4	Arsenic acid		X		X	
7778-44-1	Calcium arsenate	X	X			
7778-50-9	Potassium bichromate		X			
7778-54-3	Calcium hypochlorite		X			
7779-86-4	Zinc hydrosulfite		X			
7779-88-6	Zinc nitrate		X			
7782-41-4	Fluorine	X	X		X	
7782-49-2	Selenium		X	X	X	
7782-50-5	Chlorine	X	X	X		
7782-63-0	Ferrous sulfate		X			
7782-82-3	Sodium selenite		X			
7782-86-7	Mercurous nitrate		X			
7783-00-8	Selenous acid	X	X		X	

CAS Number	Chemical Name	Section 304				
		5302	CERCLA	5313	RCRA	STATE
7783-06-4	Hydrogen sulfide	X	X		X	
7783-07-5	Hydrogen selenide	X				
7783-18-8	Ammonium thiosulfate		X			
7783-20-2	Ammonium sulfate (solution)			X		
7783-35-9	Mercuric sulfate		X			
7783-46-2	Lead fluoride		X			
7783-49-5	Zinc fluoride		X			
7783-50-8	Ferric fluoride		X			
7783-56-4	Antimony trifluoride		X			
7783-60-0	Sulfur tetrafluoride	X				
7783-70-2	Antimony pentafluoride	X				
7783-80-4	Tellurium hexafluoride	X				
7784-34-1	Arsenous trichloride	X	X			
7784-40-9	Lead arsenate		X			
7784-41-0	Potassium arsenate		X			
7784-42-1	Arsine	X				
7784-46-5	Sodium arsenite	X	X			
7785-84-4	Sodium phosphate, tribasic		X			
7786-34-7	Mevinphos	X	X		X	
7786-81-4	Nickel sulfate		X			
7787-47-5	Beryllium chloride		X			
7787-49-7	Beryllium fluoride		X			
7787-55-5	Beryllium nitrate		X			
7788-98-9	Ammonium chromate		X			
7789-00-6	Potassium chromate		X			
7789-06-2	Strontium chromate		X			
7789-09-5	Ammonium bichromate		X			
7789-42-6	Cadmium bromide		X			
7789-43-7	Cobaltous bromide		X			
7789-61-9	Antimony tribromide		X			
7790-94-5	Chlorosulfonic acid		X			
7791-12-0	Thallous chloride	X	X		X	
7791-23-3	Selenium oxychloride	X				
7803-51-2	Phosphine	X	X		X	
7803-55-6	Ammonium vanadate		X		X	
8001-35-2	Campechlor	X	X	X	X	
8001-58-9	Creosote		X		X	
8003-19-8	Dichloropropane - Dichloropropene (mixture)		X			
8003-34-7	Pyrethrins		X			
8014-95-7	Sulfuric acid		X			
8023-53-8	Dichlorobenzalkonium chloride	X				
8065-48-3	Demeton	X				
9004-66-4	Ferric dextran		X		X	

Section 304

CAS Number	Chemical Name	§302	CERCLA	§313	RCRA	STATE
10022-70-5	Sodium hypochlorite		X			
10025-65-7	Platinous chloride	X				
10025-73-7	Chromic chloride	X				
10025-87-3	Phosphorus oxychloride	X	X			
10025-91-9	Antimony trichloride		X			
10025-97-5	Iridium tetrachloride	X				
10026-11-6	Zirconium tetrachloride		X			
10026-13-8	Phosphorus pentachloride	X				
10028-15-6	Ozone	X				
10028-22-5	Ferric sulfate		X			
10031-59-1	Thallous sulfate	X	X		X	
10034-93-2	Hydrazine sulfate			X		
10039-32-4	Sodium phosphate, dibasic		X			
10043-01-3	Aluminum sulfate		X			
10045-89-3	Ferrous ammonium sulfate		X			
10045-94-0	Mercuric nitrate		X			
10049-04-4	Chlorine dioxide			X		
10049-05-5	Chromous chloride		X			
10049-07-7	Rhodium trichloride	X				
10099-74-8	Lead nitrate		X			
10101-53-8	Chromic sulfate		X			
10101-63-0	Lead iodide		X			
10101-89-0	Sodium phosphate, tribasic		X			
10102-06-4	Uranyl nitrate		X			
10102-18-8	Sodium selenite	X	X			
10102-20-2	Sodium tellurite	X				
10102-43-9	Nitric oxide	X	X		X	
10102-44-0	Nitrogen dioxide	X	X		X	
10102-45-1	Thallium(I) nitrate		X		X	
10102-48-4	Lead arsenate		X			
10108-64-2	Cadmium chloride		X			
10124-50-2	Potassium arsenite	X	X			
10124-56-8	Sodium phosphate, tribasic		X			
10140-65-5	Sodium phosphate, dibasic		X			
10140-87-1	Ethanol, 1,2-dichloro-, acetate	X				
10192-30-0	Ammonium bisulfite		X			
10196-04-0	Ammonium sulfite		X			
10210-68-1	Cobalt carbonyl	X				
10265-92-6	Methamidophos	X				
10294-34-5	Boron trichloride	X				
10311-84-9	Dialifos	X				
10361-89-4	Sodium phosphate, tribasic		X			
10380-29-7	Cupric sulfate ammoniated		X			

CAS Number	Chemical Name	Section 304				
		S302	CERCLA	S313	RCRA	STATE
10415-75-5	Mercurous nitrate		X			
10421-48-4	Ferric nitrate		X			
10476-95-6	Methacrolein diacetate	X				
10544-72-6	Nitrogen dioxide		X		X	
10588-01-9	Sodium bichromate		X			
11096-82-5	Aroclor 1260		X			
11097-69-1	Aroclor 1254		X			
11104-28-2	Aroclor 1221		X			
11115-74-5	Chromic acid		X			
11141-16-5	Aroclor 1232		X			
12002-03-8	Paris green	X	X			
12039-52-0	Thallium(I) selenide		X		X	
12054-48-7	Nickel hydroxide		X			
12108-13-3	Manganese, tricarbonyl methylcyclopentadienyl	X				
12122-67-7	Zineb			X		
12125-01-8	Ammonium fluoride		X			
12125-02-9	Ammonium chloride		X			
12135-76-1	Ammonium sulfide		X			
12427-38-2	Maneb			X		
12672-29-6	Aroclor 1248		X			
12674-11-2	Aroclor 1016		X			
12771-08-3	Sulfur monochloride		X			
13071-79-9	Terbufos	X				
13171-21-6	Phosphamidon	X				
13194-48-4	Ethoprophos	X				
13410-01-0	Sodium selenate	X				
13450-90-3	Gallium trichloride	X				
13454-96-1	Platinum tetrachloride	X				
13463-39-3	Nickel carbonyl	X	X		X	
13463-40-6	Iron, pentacarbonyl-	X				
13463-67-7	Titanium dioxide			X		
13494-80-9	Tellurium	X				
13560-99-1	2,4,5-T salts		X			
13597-99-4	Beryllium nitrate		X			
13746-89-9	Zirconium nitrate		X			
13765-19-0	Calcium chromate		X		X	
13814-96-5	Lead Fluoborate		X			
13826-83-0	Ammonium fluoborate		X			
13952-84-6	sec-Butylamine		X			
14017-41-5	Cobaltous sulfamate		X			
14167-18-1	Salcomine	X				
14216-75-2	Nickel nitrate		X			
14258-49-2	Ammonium oxalate		X			

CAS Number	Chemical Name	Section 304				
		S302	CERCLA	S313	RCRA	STATE
14307-35-8	Lithium chromate		X			
14307-43-8	Ammonium tartrate		X			
14639-97-5	Zinc ammonium chloride		X			
14639-98-6	Zinc ammonium chloride		X			
14644-61-2	Zirconium sulfate		X			
15271-41-7	Bicyclo[2.2.1]heptane-2-carbonitrile, 5-chloro-6-(((methyle	X				
15699-18-0	Nickel ammonium sulfate		X			
15739-80-7	Lead sulfate		X			
15950-66-0	2,3,4-Trichlorophenol		X			
16071-86-6	Direct Brown 95			X		
16543-55-8	N-Nitrosomonicotine			X		
16721-80-5	Sodium hydrosulfide		X			
16752-77-5	Methoxyl	X	X		X	
16871-71-9	Zinc silicofluoride		X			
16919-19-0	Ammonium silicofluoride		X			
16919-58-7	Ammonium chloroplatinate	X				
16923-95-8	Zirconium potassium fluoride		X			
17702-41-9	Decaborane(14)	X				
17702-57-7	Formparanate	X				
18883-66-4	D-Glucopyranose, 2-deoxy-2-(3-methyl-3-nitrosoureido)-		X		X	
19287-45-7	Diborane	X				
19624-22-7	Pentaborane	X				
20816-12-0	Osmium tetroxide	X	X	X	X	
20830-75-5	Digoxin	X				
20830-81-3	Daunomycin		X		X	
20859-73-8	Aluminum phosphide	X	X		X	
21548-32-3	Fosfietan	X				
21564-17-0	Thiocyanic acid, 2-(benzothiazolythio)methyl ester	X				
21609-90-5	Leptophos	X				
21908-53-2	Mercuric oxide	X				
21923-23-9	Chlorthiophos	X				
22224-92-6	Fenadiphos	X				
23135-22-0	Oxaryl	X				
23422-53-9	Formetanate	X				
23505-41-1	Pirimifos-ethyl	X				
23950-58-5	3,5-Dichloro-N-(1,1-dimethyl-2-propynyl)benzamide		X		X	
24017-47-8	Triazofos	X				
24934-91-6	Chlormechos	X				
25154-54-5	Dinitrobenzene (mixed)		X			
25154-55-6	Nitrophenol (mixed)		X			
25155-30-0	Sodium dodecylbenzene sulfonate		X			
25167-82-2	Trichlorophenol		X			
25168-15-4	2,4,5-T esters		X			

CAS Number	Chemical Name	Section 304				
		5302	CERCLA	5313	RCRA	STATE
25168-26-7	2,4,-D Esters		X			
25321-14-6	Dinitrotoluene		X			
25321-22-6	Dichlorobenzene (mixed)		X	X		
25376-45-8	Diaminotoluene		X	X	X	
25550-58-7	Dinitrophenol		X			
26264-06-2	Calcium dodecylbenzene sulfonate		X			
26419-73-8	Carbamic acid, methyl-, O-(((2,4-dimethyl-1, 3-dithiolan-2-yl	X				
26471-62-5	Benzene, 2,4-diisocyanatomethyl-		X		X	
26628-22-8	Sodium azide (Na(N3))	X	X		X	
26638-19-7	Dichloropropane		X			
26952-23-8	Dichloropropene		X			
27137-85-5	Trichloro(dichlorophenyl)silane	X				
27176-87-0	Dodecylbenzenesulfonic acid		X			
27323-41-7	Triethanolamine dodecylbenzene sulfonate		X			
27774-13-6	Vanadyl sulfate		X			
28300-74-5	Antimony potassium tartrate		X			
28347-13-9	Xylylene dichloride	X				
28772-56-7	Bromadiolone	X				
30525-89-4	Paraformaldehyde		X			
30674-80-7	Methacryloyloxyethyl isocyanate	X				
32534-95-5	2,4,5-TP acid esters		X			
33213-65-9	beta - Endosulfan		X			
36478-76-9	Uranyl nitrate		X			
37211-05-5	Nickel chloride		X			
39156-41-7	2,4-Diaminoanisoole sulfate			X		
39196-18-4	Thiofanox	X	X		X	
42504-46-1	Isopropanolamine dodecylbenzene sulfonate		X			
50782-69-9	Phosphonothioic acid, methyl-, S-(2-(bis(1-methylethyl)amino	X				
52628-25-8	Zinc ammonium chloride		X			
52652-59-2	Lead stearate					
52740-16-6	Calcium arsenite		X			
53467-11-0	2,4-D Esters		X			
53469-21-0	Aroclor 1242		X			
53558-25-1	Pyriminil	X				
55488-87-4	Ferric ammonium oxalate		X			
56189-09-4	Lead stearate		X			
58270-08-9	Zinc, dichloro(4,4-dimethyl-5((((methylamino) carbonyl)oxy)i	X				
61792-07-2	2,4,5-T esters		X			
62207-76-5	Cobalt, ((2,2'-(1,2-ethanediy)lbis (nitrilomethylidyne))bis(6	X				

Chemical Category	Section 304				
	§302	CERCLA	§313	RCRA	STATE
Organorhodium Complex	X				
Barium Compounds			X		
Cobalt Compounds			X		
Cyanide and Compounds		X	X		
Glycol Ethers			X		
Manganese Compounds			X		
Polybrominated Biphenyls (PBBs)			X		
Antimony and Compounds		X	X		
Arsenic and Compounds		X	X		
Beryllium and Compounds		X	X		
Cadmium and Compounds		X	X		
Chlordane (Technical Mixture and Metabolites)		X			
Chlorinated Benzenes		X			
Chlorinated Ethanes		X			
Chlorinated Naphthalene		X			
Chlorinated Phenols		X	X		
Chloroalkyl Ethers		X			
Chromium and Compounds		X	X		
Coke Oven Emissions		X			
Copper and Compounds		X	X		
DDT and Metabolites		X			
Dichlorobenzidine		X			
Diphenylhydrazine		X			
Endosulfan and Metabolites		X			
Endrin and Metabolites		X		X	
Haloethers		X			
Halomethanes		X			
Heptachlor and Metabolites		X			
Lead and Compounds		X	X		
Mercury and Compounds		X	X		
Nickel and Compounds		X	X		
Nitrophenols		X			
Nitrosamines		X			
Phthalate Esters		X			
Polynuclear Aromatic Hydrocarbons		X			
Radionuclides		X			
Selenium and Compounds		X	X		
Silver and Compounds		X	X		
Thallium and Compounds		X	X		
Zinc and Compounds		X	X		

ATTACHMENT D

CRITERIA FOR IDENTIFICATION OF HAZARDOUS WASTES
AND EXTREMELY HAZARDOUS WASTES
LISTED IN

CALIFORNIA ADMINISTRATIVE CODE

TITLE 22. SOCIAL SECURITY

DIVISION 4. ENVIRONMENTAL HEALTH

66696. Toxicity Criteria.

- (a) A waste, or a material, is toxic and hazardous if it:
 - (1) Has an acute oral LD₅₀ less than 5,000 milligrams per kilogram; or
 - (2) Has an acute dermal LD₅₀ less than 4,300 milligrams per kilogram; or
 - (3) Has an acute inhalation LC₅₀ less than 10,000 parts per million as a gas or vapor; or
 - (4) Has an acute aquatic 96-hour LC₅₀ less than 500 milligrams per liter when measured in soft water (total hardness 40 to 48 milligrams per liter of calcium carbonate) with fathead minnows (*Pimephales promelas*), rainbow trout (*Salmo gairdneri*) or golden shiners (*Notemigonus crysoleucas*) according to procedures described in Part 800 of "Standard Methods for the Examination of Water and Wastewater (15th Edition)", American Public Health Association, 1981, or by other test methods or test fish approved by the Department, using test samples prepared or meeting the conditions for testing as prescribed in Section 66700(c) and (d), and solubilized, suspended, dispersed or emulsified by the procedures recommended in Part 800 of the cited text or by other methods approved by the Department; or
 - (5) Contains any of the following substances at a single or combined concentration equal to or exceeding 0.001 percent by weight:
 - (A) 2-Acetylaminofluorene (2-AAF)
 - (B) Acrylonitrile
 - (C) 4-Aminodiphenyl
 - (D) Benzidine and its salts
 - (E) bis (Chloromethyl) ether (BCME)
 - (F) Methyl chloromethyl ether
 - (G) 1,2-Dibromo-3-chloropropane (DBCP)
 - (H) 3,3'-Dichlorobenzidine and its salts (DCB)
 - (I) 4-Dimethylaminoazobenzene (DAB)
 - (J) Ethyleneimine (EL)
 - (K) α -Naphthylamine (1-NA)
 - (L) β -Naphthylamine (2-NA)

- (M) 4-Nitrobiphenyl (4-NBP)
- (N) N-Nitrosodimethylamine (DMN)
- (O) β -Propiolactone (BPL)
- (P) Vinyl chloride (VCM); or

(6) Has been shown through experience or testing to pose a hazard to human health or environment because of its carcinogenicity, acute toxicity, chronic toxicity, bioaccumulative properties or persistence in the environment; or

(7) Is listed in 40 CFR 261 (codified July 1, 1982) as a hazardous waste which is:

- (A) From a nonspecific source listed in Section 261.31; or
- (B) From a specific source listed in Section 261.32; or
- (C) An acute hazardous commercial chemical product or manufacturing chemical intermediate listed in Section 261.33(e); or
- (D) A toxic commercial chemical product or manufacturing chemical intermediate listed in Section 261.33(f).

(b) A waste containing one or more materials which are toxic according to the criterion of subsection (a) (3) of this section may be classified as nonhazardous pursuant to Section 66305 if the waste is not hazardous by any other criterion of this article and its head space vapor contains no such toxic materials in concentrations exceeding their respective eight-hour inhalation LC_{50} or their LC_{LO} . The head space vapor of a waste shall be prepared, and two milliliters of it shall be sampled using a five milliliter gas-tight syringe, according to method 5020 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982. The quantity of each material in milligrams, which is toxic according to the criterion of paragraph (a) (3) of this section, in the sampling syringe shall be determined by comparison to liquid standard solutions according to the appropriate gas chromatographic procedures in method 8010, 8015, 8020 or 8030 in "Test Methods for Evaluating Solid Wastes, Physical/Chemical Methods", SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982. The concentration of each material in the head space vapor shall be calculated using the following equation:

$$C_A = \frac{Q_A}{MW} \times 29.8 \text{ ml/mole} \times \frac{1}{2 \times 10^{-6} \text{ M}^3}$$

where C_A (in parts per million) is the concentration of material A in head space vapor, Q_A (in milligrams) is the quantity of material A in sampling syringe and MW (in milligrams per millimole) is the molecular weight of material A. Where an eight-hour LC_{50} is not available, an LC_{50} measured for another time (t) may be converted to an eight-hour value with the following equation:

$$\text{Eight-hour } LC_{50} = (t/8) \times (t\text{-hour } LC_{50}).$$

(c) A waste containing one or more materials which are toxic according to any criterion of paragraph (a) (1) or (a) (2) of this section may be classified as nonhazardous pursuant to Section 66305 if the waste is not hazardous by any other criterion of this article and the calculated oral LD_{50} of the waste mixture is greater than 5,000 milligrams per kilogram and the calculated dermal LD_{50} is greater than 4,300 milligrams per kilogram by the following equation:

$$\text{Calculated oral or dermal LD}_{50} = \frac{100}{\sum_{x=1}^n \frac{\%Ax}{T_{Ax}}}$$

where %Ax is the weight percent of each component in the waste mixture and T_{Ax} is the acute oral or dermal LD_{50} or the acute oral LD_{LO} of each component.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Editorial correction filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41).

66699. Persistent and Bioaccumulative Toxic Substance.

(a) Any waste is a hazardous waste which contains a substance listed in subsections (b) or (c) of this section:

(1) at a concentration in milligrams per liter as determined pursuant to Section 66700 which exceeds its listed soluble threshold limit concentration, or

(2) at a concentration in milligrams per kilogram in the waste which exceeds its listed total threshold limit concentration.

(b) List of Inorganic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values.

Substance	STLC	TTLC
	mg/l	Wet-Weight mg/kg
Antimony and/or antimony compounds.....	15	500
Arsenic and/or arsenic compounds	5.0	500
Asbestos	—	1.0
		(as percent)
Barium and/or barium compounds (excluding bar- ite)	100	10,000††
Beryllium and/or beryllium compounds.....	0.75	75
Cadmium and/or cadmium compounds	1.0	100
Chromium (VI) compounds	5	500
Chromium and/or chromium (III) compounds	560	2,500
Cobalt and/or cobalt compounds	80	8,000
Copper and/or copper compounds	25	2,500
Fluoride salts	180	18,000
Lead and/or lead compounds	5.0	1,000
Mercury and/or mercury compounds	0.2	20
Molybdenum and/or molybdenum compounds	350	3,500
Nickel and/or nickel compounds	20	2,000
Selenium and/or selenium compounds.....	1.0	100
Silver and/or silver compounds	5	500
Thallium and/or thallium compounds.....	7.0	700
Vanadium and/or vanadium compounds	24	2,400
Zinc and/or zinc compounds.....	250	5,000

* STLC and TTLC values are calculated on the concentrations of the elements, not the compounds.

† In the case of asbestos and elemental metals, applies only if they are in a friable, powdered or finely divided state. Asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.

†† Excluding barium sulfate.

(c) List of Organic Persistent and Bioaccumulative Toxic Substances and Their Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC) Values.

<i>Substance</i>	<i>STLC</i>	<i>TTLC</i>
	<i>mg/l</i>	<i>Wet Weight mg/kg</i>
Aldrin	0.14	1.4
Chlordan	0.25	2.5
DDT, DDE, DDD	0.1	1.0
2,4-Dichlorophenoxyacetic acid	10	100
Dieldrin	0.8	8.0
Dioxin (2,3,7,8-TCDD)	0.001	0.01
Endrin	0.02	0.2
Heptachlor	0.47	4.7
Kepone	2.1	21
Lead compounds, organic	—	13
Lindane	0.4	4.0
Methoxychlor	10	100
Mirex	2.1	21
Pentachlorophenol	1.7	17
Polychlorinated biphenyls (PCBs)	5.0	50
Toxaphene	0.5	5
Trichloroethylene	204	2,040
2,4,5-Trichlorophenoxypropionic acid	1.0	10

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Editorial correction filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41).

66700. Waste Extraction Test (WET).

(a) The WET described in this section shall be used to determine the amount of extractable substance in a waste or other material as set forth in Section 66699(a).

(b) Except as provided in Section 66700(d), the WET shall be carried out if the total concentration in the waste, or other material, of any substance listed in Section 66699 equals or exceeds the STLC value, but does not exceed the TTLC value, given for that substance. The total concentrations of substances listed in Section 66699 shall be determined by analysis of samples of wastes, or other materials, which have been prepared, or meet the conditions, for analysis as set forth in subsections (c) and (d) of this section. Methods used for analysis for total concentrations of substances listed in Section 66699 shall be those given in the following documents or alternate methods that have been approved by the Department pursuant to Section 66310(e):

(1) For metal elements and their compounds, the waste shall be digested according to the indicated methods described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982:

(A) All listed metal elements and their compounds, except hexavalent chromium: Method 3050.

(B) Hexavalent chromium: Method 3060.

(2) For the following substances, the indicated methods as described in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982 shall be utilized:

(A) Antimony: Method 7040 or Method 7041.

(B) Arsenic: Method 7060 or Method 7061.

(C) Barium: Method 7080 or Method 7081.

(D) Cadmium: Method 7131.

(E) Total chromium: Method 7190.

(F) Hexavalent chromium: Method 7195, Method 7196 or Method 7197.

(G) Lead: Method 7421.

(H) Mercury: Method 7470 or Method 7471.

(I) Nickel: Method 7520 or Method 7521.

(J) Selenium: Method 7740 or Method 7741.

(K) Silver: Method 7760 or Method 7761.

(L) Trichloroethylene: Method 8010 or Method 8240.

(M) Pentachlorophenol: Method 8040, Method 8250 or Method 8270.

(N) Aldrin, Lindane, Chlordane, DDD, DDE, DDT, Dieldrin, Heptachlor, Toxaphene and PCBS: Method 8080, Method 8250 or Method 8270.

(O) 2,4-Dichlorophenoxyacetic acid and 2,4,5-trichlorophenoxypropionic acid: Method 8150.

(3) For the following substances, the indicated methods as described in "Methods for Chemical Analysis of Water and Wastes", EPA-600/4-79-020, U.S. Environmental Protection Agency, 1979 shall be utilized:

(A) Beryllium: Method 210.1 or Method 210.2.

(B) Cobalt: Method 219.1 or Method 219.2.

(C) Copper: Method 220.1 or Method 220.2.

(D) Molybdenum: Method 246.1 or Method 246.2.

(E) Thallium: Method 279.1 or Method 279.2.

(F) Vanadium: Method 286.1 or Method 286.2.

(G) Zinc: Method 289.1 or Method 289.2.

(H) Fluoride: Method 340.1, Method 340.2 or Method 340.3.

(4) For the following substances, the indicated methods as described in "Manual of Analytical Methods for the Analysis of Pesticides in Humans and Environmental Samples", EPA-600/8-80-038, U.S. Environmental Protection Agency, 1980 shall be utilized:

(A) Kepone: Section 5,A,(5),(a).

(B) 2,3,7,8-Tetrachlorodibenzo-p-dioxin: Section 9,G.

(5) For asbestos, the indicated method as described in the Federal Register, Volume 47, Number 103, Appendix A, pages 23376-23389, May 7, 1982 shall be utilized.

(c) Samples shall be prepared for analysis for total and extractable content of substances listed in Section 66699 (b) and (c) as follows:

(1) Type i: If the waste or other material is a millable solid, the sample shall be passed directly, or shall be milled to pass, through a No. 10 (two millimeter) standard sieve before it is analyzed. If the sample contains non-friable solid particles which do not pass directly through a No. 10 sieve and which are extraneous and irrelevant as hazardous constituents to the waste or other material, they shall be removed to the extent feasible by mechanical means and discarded. Solids which remain in the waste or other material after removal of the aforesaid extraneous particles shall be milled to pass through a No. 10 sieve and shall then be combined and mixed well with the solids which passed through the sieve without milling. The reconstituted sample shall then be analyzed as prescribed in this section.

(2) Type ii: If the waste or other material is a filterable mixture of liquid and solids in which the solids constitute five-tenths (0.5) percent by weight or greater of the sample, the liquid and solids shall be separated by filtration through a 0.45 micron membrane filter. The filtrate so obtained is to be designated as Initial Filtrate. Its volume is determined, and it is retained. The separated solids shall be sieved in a No. 10 sieve and any nonfriable extraneous particles of the kinds described in subsection (c) (1) which do not pass through the sieve shall be removed to the extent feasible by mechanical means and discarded. The solids which remain after removal of the extraneous particles shall be milled to pass through a No. 10 sieve and shall be recombined with solids which passed through the sieve without milling. This recombined solid material shall be extracted following the procedure in subsection (f). A ratio of 10 milliliters of extraction solution per gram of solid shall be utilized with appropriate modifications for extraction vessel size. After completion of solids extraction, the filtered extractant is combined with Initial Filtrate mixed thoroughly and analyzed as described in subsection (f) (3).

(3) Type iii: If the waste or other material is a nonfilterable and nonmillable sludge, slurry, or oily, tarry or resinous material, it shall be analyzed as received unless it contains non-friable extraneous and irrelevant solid particles of the kinds described in paragraph (c) (1) of this section. If it contains such solid particles and they are of such size as not to pass through a No. 10 sieve, they shall be removed to the extent feasible by mechanical means and discarded. The remainder of the sample shall be analyzed as prescribed in this section.

(4) If it is necessary to dry a solid sample or the solids fraction of a sample before sieving, milling or removal of extraneous solids, or if a sample is dried prior to analysis, all weight losses due to drying shall be determined, and these losses and the conditions of drying shall be reported.

(d) If the waste or other material is a liquid containing less than five-tenths (0.5) percent by weight of undissolved solids, it shall not be subject to the WET procedure, but shall be analyzed directly for the substances listed in Section 66699. The waste shall be classified as a hazardous waste if the total concentration in the waste of any substances listed in Section 66699 exceeds the TTLC value given for that substance. If, however, the total concentration is less than the TTLC but exceeds the STLC when expressed on a milligrams per liter basis, the waste or other material shall be filtered through a 0.45 micron membrane filter, the solids discarded and the filtrate shall be analyzed directly for the substances listed in Section 66699. The waste shall be classified as a hazardous waste if the concentration in the filtrate of any of the substances listed in Section 66699 exceeds the STLC value given for that substance.

(e) The WET extraction solution shall consist of 0.2 M sodium citrate at pH 5.0 ± 0.1 , which is prepared by titrating an appropriate amount of analytical grade citric acid in deionized water with 4.0 N NaOH, except that the extraction solution for the determination of chromium (VI) shall consist of deionized water.

(f) The extraction procedure shall be as follows:

(1) Fifty grams of sample, or less if it is a type ii sample prepared pursuant to subsection (c) (2), obtained pursuant to subsection (c) or (d) of this section shall be placed in a clean polyethylene or glass container designated the Treatment, capable of physically withstanding the extraction procedure and which was rinsed previously with, in succession, an aqueous 1:1 ratio by volume nitric acid solution and deionized water. If the extract will be analyzed for any of the organic substances listed in Section 66699(c), a glass container shall be used. Furthermore, a container of the same size, shape and material shall be used for an extraction designated as the Blank, which shall be carried through the same procedure as the Treatment, but without addition of the sample.

(2) Five hundred milliliters of extraction solution, or less if the waste sample is a type ii sample prepared pursuant to subsection (c) (2) shall be added to the Treatment and Blank containers, which shall be then fitted with covered air scrubbers extended well into the extraction solutions and flushed vigorously with nitrogen gas for 15 minutes so as to remove and exclude atmospheric oxygen from the extraction medium. If the sample is to be analyzed for any volatile substance, such as trichloroethylene, the sample shall be added after deaeration with nitrogen to avoid volatilization loss. After deaeration the containers shall be quickly sealed with tightly fitting caps and agitated, using a table shaker, an overhead stirrer or a rotary extractor, operated at a speed which shall maintain the sample in a state of vigorously agitated suspension. Required equipment is described in test method 1310 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, 2nd edition, U.S. Environmental Protection Agency, 1982. The temperature during the extraction shall be maintained between 20 and 40 degrees centigrade. After 48 hours of extracting, the contents of the Treatment and Blank containers shall be either filtered directly or centrifuged and then filtered. Filtering shall be through a medium porosity prefilter and then through a 0.45 micron membrane filter, using a clean, thick-walled suction flask. For coarser solids, prefiltration shall not be necessary. Pressure filtration shall be an optional alternative to vacuum filtration. If the extracts are first centrifuged, glass or polyethylene bottles shall be used as prescribed for extraction. For very fine solids, centrifuging at as high as $10,000 \times G$ may be necessary. After centrifugation, the liquids shall be decanted, prefiltered if necessary, and then passed through a 0.45 micron membrane filter. All filters shall be of low and identified extractable heavy metals, fluoride and organic chemicals content.

(3) If the filtered extracts are to be analyzed only for the metal elements listed in Section 66699(b), the filtered extracts from the Treatment and Blank shall be transferred to clean polyethylene bottles and acidified with nitric acid to five percent by volume acid content soon after each extract is filtered. For those wastes or waste materials classified under subsection (c) (2), the Treatment shall be the Initial Filtrate combined with the extract generated by the WET extraction of the initially separated solids. Similarly the Blank in this instance shall be the filtrate generated by the WET Blank accompanying the initially separated solids, to which is subsequently added a volume of deionized

water equivalent to that of the Initial Filtrate. These procedures shall be followed prior to acidification of Treatment and Blank solutions with nitric acid to five percent (by volume) acid content. The bottle shall then be stored at room temperature or frozen. If the extracts are also to be analyzed for the organic substances listed in Section 66699 (c), or for the organic substances only, the filtered extracts shall be transferred to clean glass bottles. If the extracts are to be analyzed for fluoride, they shall be transferred to clean polyethylene bottles. These extracts, containing organic substances or fluoride, shall not be acidified, but shall be frozen soon after each extract is obtained and held frozen until the day of analysis, unless the extracts are analyzed within 24 hours.

(g) Sample analysis and data treatment shall be as follows:

(1) Each of the filtered extracts from the Treatment and Blank extractions shall have been acidified to five percent by volume nitric acid, and stored at room temperature or frozen in polyethylene bottles or kept frozen without addition of acid in glass bottles until the day of analysis, as prescribed. Each of the extracts shall be thoroughly mixed just prior to being individually analyzed for the substances listed in Section 66699 in order to determine whether the extractable concentration (EC) in the waste or other material exceeds the STLC for any of the substances listed. The extracts shall be analyzed according to the procedures identified in Sections 66700(b) (2), (b) (3) and (b) (4).

(2) The net EC of a substance in the Treatment sample which is listed in Section 66699 shall be calculated and reported as milligrams per liter of sample (mg/l). This value is derived after subtracting the concentration of the substance in the appropriate Blank extract from that concentration determined in the Treatment extract.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Editorial correction filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41).

66702. Ignitability Criteria.

(a) A waste, or a material, is ignitable and hazardous if it:

(1) Is a liquid, other than an aqueous solution containing less than 24 percent alcohol by volume, and has a flash point less than 60 degrees centigrade (140 degrees Fahrenheit), as determined by a Pensky-Martens Closed Cup Tester, using the test method specified in American Society for Testing and Materials (ASTM) Standard D-93-79, or a Setaflash Closed Cup Tester, using the test method specified in ASTM Standard D-3278-73; or

(2) Is not a liquid and is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creates a hazard; or

(3) Is a flammable compressed gas as defined in 49 CFR 173.300(b) (codified October 1, 1982) and as determined by the test methods described in that regulation; or

(4) Is an oxidizer as defined in 49 CFR 173.151 (codified October 1, 1982).

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

66705. Reactivity Criteria.

- (a) A waste, or a material, is reactive and hazardous if it:
- (1) Is normally unstable and readily undergoes violent change without detonating; or
 - (2) Reacts violently with water; or
 - (3) Forms potentially explosive mixtures with water; or
 - (4) Generates toxic gases, vapors or fumes, when mixed with water, in a quantity sufficient to present a danger to human health or the environment; or
 - (5) Is a cyanide or sulfide bearing waste which, when exposed to pH conditions between 2 and 12.5, generates toxic gases, vapors or fumes in a quantity sufficient to present a danger to human health or the environment; or
 - (6) Is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement; or
 - (7) Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure; or
 - (8) Is a forbidden explosive as defined in 49 CFR 173.51 (codified October 1, 1982), or a Class A explosive as defined in 49 CFR 173.53 (codified October 1, 1982), or a Class B explosive as defined in 49 CFR 173.88 (codified October 1, 1982).

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

66708. Corrosivity Criteria.

- (a) A waste, or a material, is corrosive and hazardous if it:
- (1) Is aqueous and has a pH less than or equal to 2 or greater than or equal to 12.5, or its mixture with an equivalent weight of water produces a solution having a pH less than or equal to 2 or greater than or equal to 12.5. The pH shall be determined by a pH meter using either test method 9040 specified in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, U.S. Environmental Protection Agency, 2nd edition, 1982, or as described in "Methods for Chemical Analysis of Water and Wastes", EPA 600/4-79-020, March 1979; or
 - (2) Is a liquid, or when mixed with an equivalent weight of water produces a liquid, and corrodes steel (SAE 1020) at a rate greater than 6.35 millimeters (0.250 inch) per year at a test temperature of 55 degrees centigrade (130 degrees Fahrenheit) as determined by the test method specified in the National Association of Corrosion Engineers (NACE) Standard TM-01-69 as standardized as test method 1110 in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, U.S. Environmental Protection Agency, 2nd edition, 1982.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Editorial correction filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41).

66717. Applicability of Extremely Hazardous Waste Criteria.

Any waste which is extremely hazardous pursuant to any of the criteria of Sections 66720 or 66723 is an extremely hazardous waste and shall be managed in accordance with the provisions of this chapter.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

66720. Extremely Hazardous Criteria.

- (a) A waste, or a material, is extremely hazardous if it:
- (1) Has an acute oral LD₅₀ less than or equal to 50 milligrams per kilogram; or

(2) Has an acute dermal LD₅₀ less than or equal to 43 milligrams per kilogram; or

(3) Has an acute inhalation LC₅₀ less than or equal to 100 parts per million as a gas or vapor; or

(4) Contains any of the substances listed in Section 66696(a) (5) at a single or combined concentration equal to or exceeding 0.1 percent by weight; or

(5) Has been shown through experience or testing to pose an extreme hazard to the public health because of its carcinogenicity, high acute or chronic toxicity, bioaccumulative properties, or persistence in the environment; or

(6) Is water-reactive.

(b) A waste containing one or more materials which are extremely toxic according to any criterion of paragraphs (a) (1) or (a) (2) of this section may be classified by the Department as not extremely hazardous if neither the calculated acute oral toxicity nor the calculated acute dermal toxicity of the waste using the equation in Section 66696(c) is numerically equal to or less than the toxicity limits prescribed in paragraphs (a) (1) or (a) (2) of this section and the waste is not extremely hazardous by any other criterion of this section.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.

HISTORY:

1. Editorial correction filed 10-5-84; designated effective 10-27-84 (Register 84, No. 41).

66723. Total Threshold Limit Concentration Values of Persistent and Bioaccumulative Toxic Substances in Extremely Hazardous Wastes.

(a) Any waste containing a substance listed in subsection (b) of this section at a concentration equal to or exceeding its listed total threshold limit concentration is an extremely hazardous waste.

(b) List of Persistent and Bioaccumulative Toxic Substances and Their Total Threshold Limit Concentration (TTLC) Values.

<i>Substance</i>	<i>TTLC (Wet-Weight in mg/kg)</i>
Aldrin	140
Arsenic and/or arsenic compounds.....	50,000 (as As)
Beryllium and/or beryllium compounds*	7,500 (as Be)
Cadmium and/or cadmium compounds*	10,000 (as Cd)
Chlordan.....	250
2,4-Dichlorophenoxyacetic acid	10,000
Dieldrin	800
Dioxin (2,3,7,8-TCDD)	1
Endrin.....	20
Heptachlor	470
Kepone	2,100
Lead compounds, organic	1,300 (dry weight basis; as Pb)
Lindane.....	400
Mercury and/or mercury compounds	2,000 (as Hg)
Mirex	2,100
Polychlorinated biphenyls (PCBs)	5,000
Selenium and/or selenium compounds*	10,000 (as Se)
Thallium and/or thallium compounds*	70,000 (as Tl)
Toxaphene	500
2,4,5-Trichlorophenoxypropionic acid	1,000

* In the case of elemental metals, applies only if they are in a friable, powdered or finely divided state.

NOTE: Authority cited: Sections 208, 25141 and 25150, Health and Safety Code. Reference: Section 25141, Health and Safety Code.



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

E. N. Fono, R. J. Brady

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING

FORECASTED HAZARDOUS WASTE LEVELS IN THE YEAR 2000

TECHNICAL MEMORANDUM NO. 4

September 1987

Revised November 1987

This is the second memorandum in a series on forecasting hazardous waste generation for Bay Area industries in the year 2000. This memorandum will discuss the methodology used to collect the data, the calculations performed and the results.

Data on hazardous waste generators in 1986 were provided by the Department of Health Services. The data was listed by county and consisted of the EPA generator number, type of hazardous waste produced, tons of waste per type and a total amount of waste per generator. Only generators exporting waste for off-site treatment disposal were included. Standard Industrial Classification (SIC) codes were assigned to each waste generator (Attachment 1 lists the SIC codes). These codes are established by the Office of Management and Budget to classify economic activity by industry type. Using the Standard Industrial Classification Manual of 1972 and the 1977 supplement, SIC codes were assigned to generators for which sufficient knowledge about the nature of their business was known. Those generators we knew little or nothing about, were telephoned and questioned about their business. If we were unable to obtain information about a generator, they were assigned an SIC Code of 99, representing the unclassified section.

The results are on a county by county basis. Data was calculated using constant 1982 dollars. The data was first sorted by county and then by SIC code. SIC codes were grouped into 32 different sectors. This allowed for the largest possible amount of detail. These sectors also allowed for ABAG employment forecasts found in Projections '87 to be used for this projection study. The SIC codes were grouped as follows:

<u>Sector No.</u>	<u>SIC Codes</u>
1. Agriculture, Forestry, Fisheries	1, 2, 7, 8, 9
2. Mining	10, 11, 12, 13, 14
3. Construction	15, 16, 17
4. Ordinance	Consolidated in Sector 17
5. Food, Beverage	20, 21
6. Textile and Apparel Products	22, 23
7. Lumber, Wood, Paper Products, Furniture ..	24, 25, 26
8. Printing and Publishing	27
9. Chemicals and Allied Products	28
10. Petroleum Refining and Related Industries .	29
11. Rubber and Leather Products	30, 31
12. Stone, Clay Glass and Concrete	32
13. Primary Metals	33
14. Fabricated Metals	34
15. Non-Electrical Machinery, Computers and Office Equipment	35
16. Electrical and Electronic Machinery, Equipment and Supplies	36
17. Transportation Equipment	37
18. Professional, Scientific Equipment and Miscellaneous Manufacturing	38, 39
19. Transportation Services	40, 41, 44, 45, 46, 47
20. Truck Transportation	42
21. Communication	48
22. Utilities	49
23. Wholesale Trade	50, 51
24. Retail Trade	52, 53, 54, 55, 56, 57, 58, 59
25. Finance, Insurance, and Real Estate	60, 61, 62, 63, 64, 65, 66, 67
26. Hotel and Lodging Places	70
27. Personal and Repair Services	72, 75, 76,
28. Business and Professional Services	73, 81, 89
29. Amusement and Recreational Services	78, 79
30. Health Sciences	80
31. Education Services	82, 83, 84, 86
32. Government	91, 92, 93, 94, 95, 96, 97, 43

The methodology used in this study is as follows:

- o Waste generation data was obtained by waste number (assigned by the D.H.S. for each type of waste) for each generator in a county.
- o Two-digit SIC codes were assigned to each generator.
- o Waste tonnages were added together by SIC code, keeping separate all unique waste numbers.
- o SIC code data was grouped into 32 sectors, keeping separate all unique waste numbers.

- o Calculation of future waste production was performed. This method was presented in Technical Memo No. 2 and is briefly described below.

For each sector, the amount of hazardous waste was added together. The calculation below was performed for each sector on a county by county basis.

$$\frac{\text{tons of waste produced in 1986}}{\text{1985 output in constant 1982 \$}} \times \frac{\text{2000 output in constant 1982 \$}}{\text{tons of waste produced in 2000}}$$

The output in dollars was calculated by multiplying the forecasted employment by the output/worker value for each sector. For each county, the forecasted employment was different for each year and sector. The output/worker value remained constant for all counties, but was different for each year and sector.

- o Waste levels from 32 sectors were aggregated into waste levels for nine major economic categories, still keeping separate all unique waste numbers.
- o Waste quantities were added together by waste number into 17 waste groups for each county. (waste groups are listed in attachment 2)
- o Finally, waste totals were rearranged by unique waste number, by county, keeping separate within a waste number group, the amount generated from each SIC code.

The primary reason for aggregation of economic sectors from 32 to 9 sectors was to minimize the potential forecast errors at greater detail. Forecasting at a detail level for the year 2000 becomes problematic because in several counties a minor change in the employment could substantially affect waste generation levels. The only usefulness of the detail data is to provide information on the relative distribution of waste generation within each major economic category. The nine categories are listed below.

<u>Category</u>	<u>Sector No.</u>
Agriculture & Mining	1, 2
Construction	3
Manufacturing	5 - 18
Transportation, Communication, & Utilities	19 - 22
Wholesale Trade	23
Retail Trade	24
Finance, Insurance, & Real Estate	25
Services	26 - 31
Government	32

Special cases arose for contaminated soils and asbestos-containing wastes. These wastes are cleanup oriented and are not generated by economic activity. They would need to be cleaned up and disposed of even if all economic activity ceased. Therefore, there is no way to project the amount of waste generated under these waste numbers and the future waste calculation was not done.

A number of generators could not be identified as to the nature of their business. These generators were assigned into an SIC code of 99, representing the unclassifiable category. For these generators, which could not be identified with any specific economic activity, no projections of future waste generation were performed.

Problems Requiring Detail Analysis

Any general method will not cover all exceptions that might affect waste generation. Therefore, staff undertook careful review of each county to ensure that major waste generators have been identified and classified by each industry sector. This review is incomplete and will continue. Changes will be made before the final report is issued.



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

Edward Wyatt

BAY AREA HAZARDOUS WASTE MANAGEMENT PLAN

A REVIEW OF AVAILABLE TREATMENT AND DESTRUCTION TECHNOLOGIES

TECHNICAL MEMORANDUM No. 5

October 1987

Revised December 1987

INTRODUCTION

The usual means of managing the disposal of hazardous wastes has been the use of some type of treatment; once generated, any dangerous waste must be "disposed of". This may have meant a simple holding pond or sealed drum--anything to attempt to isolate the chemical from human contact. As the quantity of toxic wastes has grown, and the disposal of these materials become more difficult to accomplish (particularly politically), this perspective has begun to shift. Options now include recycling and reuse, so that toxic compounds may have additional economic value rather than considered waste material. Even more importantly, there is strong interest in reducing the quantity of hazardous wastes generated in the first place. Source reduction, as this approach is called, has a great deal of potential. Interest in waste reduction has become strong enough that it is the focus of another paper, Technical Memorandum No. 6.

Once hazardous wastes are produced and those which can be are recycled or reused, there is no other choice than to initiate treatment. There are three general means of treating hazardous waste: physical treatment, chemical treatment, and biological treatment. Specific types of treatment technologies within these categories will be discussed below. Incineration is another method of managing wastes, but is considered a thermal/chemical transformation technology rather than one of treatment. Several types of combustion processes will be described as well.

Hazardous wastes can exist in any phase or form, but are more commonly found as liquid mixtures. Unless otherwise specified in the description of each technology, the assumption is that the waste stream to be treated is an aqueous solution containing toxic or hazardous contaminants, or a hazardous liquid. Types of general wastes treated by each technology are discussed within the description of each technology; treatment of specific waste groups (as defined by the California Department of Health Services) is outlined in the remediation table following the text.

PHYSICAL TREATMENT

Physical treatment separates components within a waste stream in order to either reduce the water content of aqueous wastes or to prepare the wastes for further treatment. It does not reduce the volume of wastes, but essentially pre-treats them. Several processes fall into this category, but we will examine the most common.

(1) *Adsorption* is a method in which a fluid waste stream (liquid or gas) is passed through a bed of either activated carbon or resin media, and certain constituents of the waste stream are adsorbed onto the medium's surface. This process occurs due to surface attraction and physical/chemical bonding between organic contaminants and the pores within the medium. A more concentrated solution is more effectively treated with a resin medium than with one of carbon. Clearly, the holding capacity of the medium is greatly enhanced by increasing its surface area. Treatment efficiencies decline as more contaminants are captured, and the medium must be regenerated to continue to do its job (this is most often accomplished by backwashing or thermal reactivation). Adsorption works best on non-polar, high molecular weight, low solubility, hydrophobic molecules, on organic chemicals, on non-metal anions, and on contaminants in low concentration. With proper regeneration, most adsorption processes can reduce contaminants by between 80 and 100 percent, depending on the chemical [HAZMACON, p. 435]. Adsorption is much less sensitive to influent concentration than other treatment methods are. It is generally an expensive process, and is not very effective on low molecular weight or highly soluble chemicals.

(2) *Filtration* is a method of separation for two distinct types of waste streams. The most common is the removal of suspended solids from an aqueous waste solution by forcing it through a porous medium (usually granular) and separating the solids from the liquid phase. The driving force can be either due to gravity or an applied pressure. For solids removal, filtration works best on waste streams of less than 200 mg/L of suspended solids, and is successful in removing metal precipitates. Experience with filtration shows that between 85 and 98 percent of solids are captured [Berkowitz, p. 475], and this method is the most reliable means of separating solid materials from an aqueous waste stream.

Another beneficial result of this process is to increase solids concentration of a sludge by removal of water. In this case, a rotary vacuum filter is frequently used, revolving in the sludge trough and forcing liquid through the filter media by means of a vacuum from within the drum. This process can increase the solids concentration of the sludge to 20-40%. Filtration is fundamentally simple and versatile, is of reasonable cost, and has very little air pollution potential. However, filtration of sludges results in incomplete separation, and of course this type of treatment method is non-selective.

(3) *Reverse osmosis* is a process whereby a dilute solution is forced through a "semi-permeable" membrane, toward a more concentrated solution. Ions and small molecules can be separated from the aqueous phase. For best results, good membrane design is critical; a polymeric material--such as cellulose acetate--is most often used. Membrane fouling is a major concern, so pretreatment is usually undertaken. High molecular weight organic

chemicals and higher charged ions can be easily removed with reverse osmosis, as long as the waste stream itself is not of particularly high concentration. Total dissolved solids can be reduced by 98-99.99%, selective cations by 88-99.9%, selective anions by 90-99.9%, biochemical oxygen demand by 90-99%, and chemical oxygen demand by 80-95% [Remedial Action, p. 10-41]. Laboratory tests have shown that total organic carbon can be reduced by at least 59%. Because of the expense of this process, the risk of membrane fouling, and the need for pretreatment, only highly toxic compounds are usually treated in this manner.

(4) *Air stripping* is used to transfer volatile contaminants, usually organic molecules, from water or soil, to a gas. A common treatment process in water treatment facilities for the removal of ammonia, it is only used with subsequent treatment when hazardous wastes are involved because of the detrimental effect it could have on air quality. The aqueous stream must be low in suspended solids and alkaline. Removal efficiencies vary with the contaminant, but tend to fall between 92 and 99+% for packed-tower strippers [Berkowitz, p. 870]. Another type of air stripper, an induced-draft stripper, has efficiencies of perhaps 75-80%.

(5) *Sedimentation* is another means by which suspended solids can be separated from aqueous wastes (by the use of gravity). It is often used in conjunction with precipitation and flocculation as pretreatment for other chemical processes. Solids removed by sedimentation are in sludge form, and must be concentrated in subsequent steps. More than ninety percent of suspended solids can be removed by this manner [Remedial Action, p. 10-34].

Other physical treatment processes include gravity separation (to separate oils from water), centrifugation (to separate liquid and solid phases of a waste stream), evaporation (to concentrate certain substances), and dissolution (to transfer from solid phase to liquid phase). These may be important in some remedial situations, while the five first described are the most common. With the exception of reverse osmosis, physical treatment methods are generally lower in cost than other treatment processes.

CHEMICAL TREATMENT

Chemical treatment is generally used to destroy or reduce the concentration of organic waste contaminants. In some cases, both chemical and physical phenomena are difficult to separate; certain actions may have both a physical and chemical explanation. Costs of chemical treatment tend to run a bit higher than those for physical treatment.

(1) *Precipitation* (one of the most common of chemical treatments) and *flocculation* are two complimentary processes which first transform a soluble product into solid phase, then increase the size of the suspended solid for easier removal. The solubility equilibrium is physio-chemically altered with the addition of a precipitating agent, and the resulting particles are made to agglomerate by affecting surface chemistry with the addition of a flocculating agent (such as a water soluble polymer or inorganic agent) and gentle stirring. These processes are easy to operate, relatively inexpensive, and there is a potential for solids recovery. Yet they are non-selective, such that the waste to be disposed of might be

enlarged and diluted with unwanted chemicals. Additionally, they are very sensitive to changes in feedwater chemistry and composition. In traditional wastewater treatment, 80-90% of total suspended solids, 40-70% of biochemical oxygen demand, and 30-60% of chemical oxygen demand can be removed with precipitation alone [Remedial Action, p. 10-16]. Metal ions can readily be removed by this combination of processes, and there are no major concentration limitations; however, this process generates a great deal of sludge.

(2) *Ion exchange* occurs when an aqueous waste stream is passed through a treated resin. Toxic ions in the waste stream are replaced with much less harmful ones from the exchange material. This technology works best for removing soluble metals, cyanides, hazardous anions, organic amines, and organic acids (at high pH) from aqueous wastes. Costs are moderate, with reagents being the highest component of operating costs. Water treatment experience has shown that 90-99% removal of dissolved solids can be achieved. There must be a low suspended solids concentration of the influent to prevent resin fouling, but the ionic concentration can be as high as about 2500-4000 mg/L.

(3) *Oxidation* is a chemical process in which the oxidation state of at least one reactant (the oxidation agent, generally chlorine or ozone) is lowered in order to raise that of another (the contaminant). Dilute fluid wastes are the main type treated with oxidation. Detoxification of cyanides, phenols, sulphur compounds, non-metal ions, and non-saturated organic species can be accomplished with oxidation. It can be used to pretreat wastes for biological oxidation. However, there are several caveats to the use of this technique; as with other methods, only wastes with a relatively low concentration of contaminants can be used. Also, the treatment chemicals themselves can be hazardous, so care must be taken with them. Unfortunately, additional metal ions are added to the effluent, and there is a danger of incomplete oxidation, with the possibility of other toxic by-products being formed.

(4) *Reduction* occurs when the oxidation state of a contaminant is lowered by increasing the oxidation number of a reducing agent. Either the toxicity or solubility of the contaminant(s) can be diminished by this process. Common reducing agents are sulfite salts or base metals. Although not generally used on organic compounds, chemical reduction is often applied to multivalent cations (chromium, mercury, iron, etc.), and to certain inorganic ions. Ultimately, the result of this process is to increase the removal efficiency of these species from dilute wastes. Chemicals make up the major cost in this treatment, and this cost rises dramatically as the waste concentration rises.

(5) *Neutralization* is also one of the most common chemical treatments, and is the means by which the pH of the waste stream is adjusted for future treatment or disposal; most often, to a pH range of 6.0-9.0. This process is simply the mixing of an acid with a base. Neutralization can also be used to stabilize inorganic compounds and to reduce the reactivity or corrosivity of the waste.

BIOLOGICAL TREATMENT

Biological treatment increases degradation by mixing microbes with aqueous organic wastes. Favorable economic results can usually be obtained from bio-treatment. Products of these processes are simply water and carbon dioxide from the organic constituents; inorganic components are not destroyed.

In order that biodegradation occurs, the mixture must remain fairly neutral (approximately $6 < \text{pH} < 9$), and the concentration of heavy metals should not usually exceed about 1%. Of course, life forms are most adept at breaking down organic substances, so these methods are best used on organic matter. Specifically, non-aromatic, unsaturated, and soluble chemicals are more successfully treated than aromatic compounds, saturated materials, or insoluble species. The most difficult chemicals to degrade biologically are heavy metals (soluble metals are toxic to microbes while insoluble metals are tolerated), but halogenated and nitrogen-substituted compounds also rarely demonstrate successful biodegradation. Several types of biological waste treatment are common.

(1) *Activated sludge treatment* acclimates microbes to a waste stream, which are recycled as new organisms are born and others die. Organic waste and the biological culture are well mixed and aerated to allow decomposition to take place. A constant turnover in organisms exists, and most types of organic wastes can be broken down. Although some pretreatment of the waste stream is recommended, metals concentration can be as high as several percent without adverse affects. Slurries, solids, and sludges are not well treated with activated sludge, but most organic species and some heavy metals can be removed. Experience with one plant and a metal-contaminated waste stream demonstrated a metals removal efficiency of about 20-80% depending on the species (12 metals measured); lowest efficiencies were for nickel, arsenic, manganese, copper, and cadmium, while the higher efficiencies occurred with metals such as chromium, zinc, mercury, iron, and selenium. Removal efficiencies rose with increasing influent concentrations [Berkowitz, p. 195]. Performance data suggest that 90-95% of biochemical oxygen demand can be removed with activated sludge. This process has relatively low cost, and is well proven technology.

(2) An *aerated lagoon* is essentially a holding pond for micro-organisms, and in many ways is similar to activated sludge treatment. Aeration is simply added to waste stabilization ponds. With aerated lagoons, the microbes are not recycled, so new organisms must be added to continue the process. In contrast to the activated sludge treatment, solids are kept in suspension until settling is allowed to take place. Laboratory tests have shown an 80-85% reduction of total organic carbon over 3-4 days with an influent concentration of about 1300 mg/L; from other experience biochemical oxygen demand removal is about 60-90% [Berkowitz, p. 208]. Longer retention times (up to 2 days) are required for similar adsorptive metals removal to that of activated sludge. Operating costs are significantly lower than for activated sludge, but larger land areas are needed so that this process may actually be more expensive in the long run.

(3) *Anaerobic digestion* is a type of microbial treatment that occurs in the absence of oxygen. This method is most often applied to sludges,

which are characterized by 2-10% total solids content and a viscous consistency. Sludges are biologically converted by this process to methane (about 2/3 of the gas production) and carbon dioxide (about 1/3) in an airtight reactor. Four basic layers form within the reactor, with scum on the top, below which lies a supernatant, the digesting sludge, and the digested sludge at the bottom. Due to the production of gases, there is a smaller quantity of sludge produced than for the previously mentioned processes (the volume of influent sludge is reduced by 40-60%). Anaerobic digestion is often used as a form of pretreatment, because it seems to enhance additional aerobic treatment; it is not particularly effective on large organic chemicals. As is generally the case with biological treatment, anaerobic digestion is sensitive to the presence of metals and chlorinated hydrocarbons. However, this process can tolerate a suspended solids concentration of several percent. It is generally accepted that 90-96% of the biochemical oxygen demand is removed [Berkowitz, p. 223].

(4) A *trickling filter* is simply a permeable filter medium (often several feet thick) upon which the microbes live, and through which oxygenated aqueous wastes can be percolated. Aerobic digestion occurs within the biological film layer, as the micro-organisms oxidize and hydrolyze organic constituents. As the layer grows, diffused oxygen cannot penetrate the full layer and an anaerobic environment is established (which may assist the primary digestion process--aerobic). Many types of organic chemicals can be handled by trickling filters, including chlorinated hydrocarbons. Influent concentration fluctuations tend to be more easily assimilated than with other forms of biological treatment, and recirculation of the effluent tends to improve removal efficiencies. From wastewater treatment experience the biochemical oxygen demand is reduced by 50-85% [Berkowitz, p. 252]. Although the relative cost of this process is small, the short residence time of the waste stream with the microbial layer keeps efficiencies below that which a sole treatment method should provide.

Many of these various treatment methods are often used together in a complimentary fashion, depending on the type of waste stream. For example, the first step in an overall treatment system is phase separation of some sort. This may involve simple removal of solids from a liquid waste stream (screening and settling), or more complicated solids removal (precipitation, flocculation, and sedimentation; flotation), or both. This stage is often followed by initial treatment. Supplemental removal (suspended solids) can occur at this point, usually performed by some type of filtration--either physical or biological, or both. In some cases, particularly with biological treatment, a gas phase is produced, and air stripping can be applied to that waste stream. Adsorption can be used on either of the two fluids (liquids or gases). Within the scope of biological treatment, trickling filters, and to some extent anaerobic digestion, are broader treatment technologies and are usually implemented first; activated sludge treatment and aeration ponds are used as "finishing" techniques. Finally, secondary treatment is performed, which may include ion exchange, reverse osmosis, or other combinations of physical or chemical treatment.

Treatment of slurries, sludge waste and other waste with reduced liquid content is somewhat similar, with the phase separation of water from solids rather than vice versa. After thickening, the sludge is then

stabilized by oxidation or biological treatment, filtered, dried, and thermally treated.

INCINERATION

The last category of hazardous waste remediation involves thermal transformation. Incineration is a promising technique that can handle large volumes of waste as well as liquid, gaseous, solid, or slurried wastes; in fact, many hazardous waste professionals believe that incineration provides the best means of solving our hazardous waste disposal problems. A potential for energy recovery exists, and the pollution produced is readily controllable (at a cost). In addition, a large reduction in the volume of wastes can be achieved.

Combustion of wastes is an expensive process, and toxic gas emissions are possible. Operation of combustors must be done carefully, as conditions with burners fluctuate and incomplete burning can result; this is particularly important with highly toxic waste streams such as those containing dioxin. Residues from both ash and air pollution treatment are disposed of as hazardous wastes. Several types of incinerators can be used for thermal transformation of wastes, and are described below.

(1) *Multiple hearth* incinerators are large steel shells surrounding a rotating shaft and a series of flat hearths. Solid wastes are fed from the top of the device, falling through holes in each hearth, and eventually removed at the bottom as ash. Both liquid and gaseous wastes can be injected through side mounted nozzles. Wastes fall through three basic zones: a drying zone (at the top), the incineration zone (in the middle), and a cooling zone (at the bottom). The incineration takes place at approximately 1800 F, and the residence time within the entire furnace can be up to several hours. As a result, good combustion occurs, and the remaining ash requiring disposal is only about 10% of the original volume. Multiple hearth incinerators are excellent for destroying sludges and granulated solid wastes, in addition to all types of combustible wastes. Although highly fuel efficient, they are also expensive to operate. About 18% of the hazardous waste incinerators sold in the United States are multiple hearth devices [Hazardous Waste Sites, p. 217].

(2) *Rotary kiln* incinerators are inclined cylindrical devices, designed for slow rotation to increase turbulence and provide better combustion. Actual thermal transformation occurs by heat transfer between the walls of the kiln and the product gases. Temperatures within the kiln fall between 1500 and 3000 F, with residence times as short as a few seconds and as long as an hour. An afterburner is often installed downstream to ensure complete combustion. Again, this device can be used with any combustible waste, and has a high incineration efficiency. Thus for mixed hazardous wastes it is often the preferred treatment.

However, there are substantial capital costs, a high degree of maintenance is required, and significant particulate production must be controlled as well. About one out of eight incinerators sold in the U.S. are rotary kilns. Like most other means of treatment, including incineration, destruction efficiencies for rotary kiln combustors can be contaminant-specific, the best data available show that destruction of most hazardous

organic wastes is 99.98-99.999+% complete [HAZMACON, p. 441].

(3) *Fluidized bed* incinerators are generally cylindrical furnaces containing an inert bed of material (often sand) through which combustible air is blown upward. Wastes are injected directly into this material. The rising air "fluidizes" the bed and creates turbulent conditions for the mixing of wastes within the bed. Heat transfer occurs between the bed itself (as a heat reservoir) and the waste material. Bed temperatures tend to range from 1400 to 1600 F. Rapid heat transfer keeps residence times down from seconds for gases to minutes for liquids. Generally all combustible wastes can be burned in a fluidized bed, but there has been limited use of these devices for hazardous waste combustion thus far. Sludges and ash can be readily taken care of by fluidized bed incineration. Although this process is efficient and has lower capital expense than some of the other incinerators, it has low capacity, high operating costs, and it can be difficult to separate the combustion residuals from the bed itself. Only about 2.6% of the hazardous waste incinerators sold are of this type. Due to the relatively low gas temperatures and excess air, formation of nitrogen oxides is minimal, reducing emission control costs.

(4) *Liquid injection* incinerators consist of a dual-chamber combustion system; combustible fluids (both liquids and gases) are introduced in the first chamber, and non-combustible wastes enter into the secondary chamber. All liquids are atomized with high pressure air or steam prior to combustion, and rapid vaporization occurs. The average temperature runs about 1600 F, but can range from about 1300 to 3000 F. Residence times are very short, usually just a few seconds; adequate excess air must be present for complete combustion. Liquids and slurries that can be readily pumped are easily handled by liquid injection incineration; this technology has also been used for "destruction" of solvents, polychlorinated biphenyls, and pesticides. This type of combustor is clearly the most popular in the U.S.; 64% of the incinerators sold are liquid injection [Hazardous Waste Sites, p. 218]. Heavy metal wastes and inorganic compounds are not appropriate for this type of combustion.

(5) *Multiple chamber* incinerators are designed with three stages in mind. Ignition occurs in the first chamber, followed by mixing (second chamber), and secondary combustion (third chamber). Solid wastes enter the first chamber and are dried, ignited and combusted, whereas gaseous wastes are injected into the mixing chamber along with excess air. The average temperatures are only about 1000 F, so residence times must be longer. Additional gas burners are added before or after the incinerator if the moisture content is above 10%. These devices can be used for most combustible solid wastes.

Many other types of combustion devices have been used for "destruction" of municipal waste products, and in some cases, hazardous waste. Open pit incinerators and stack flares are rarely used because of inadequate pollution control, and both catalytic and gas combustors are designed for burning gaseous wastes only.

Recent technologies applied to hazardous waste combustion include at-sea incineration and mobile incineration. At-sea incinerators are usually

liquid injection units on ships, and are being considered for transformation of very toxic compounds for reasons of high efficiency and distance from populated areas. However; these systems have not been readily accepted due to monitoring problems, the need for auxiliary facilities on-shore, and potential spill danger. Mobile incinerators are either liquid injection or rotary kiln types, and have been used on chlorinated organic chemicals with some good results. There are definite advantages to on-site treatment, but experience with them has been limited so far.

Finally, advanced incineration technologies have been proposed and in some cases studied, but practically no full-scale experience has been obtained so far. One of the more promising of these technologies is *molten salt* incineration. In this case a molten salt bath is contained inside a large reactor, and kept between 1470-1830 F. Shredded wastes are blown into the salt bath where the carbonate salt catalytically oxidizes the material. Two benefits are realized: combustion occurs below the normal oxidation temperatures, and with reduced pollution output (sulphur oxides in particular are negligible due to caustic salt). Noncombustible materials accumulate in the bath and the salt must be recycled. Various types of waste can be burned in molten salt incinerators, including liquids, powders, sludges, and solid wastes (preshredded). Chlorinated compounds (hydrocarbons and solvents) are readily destroyed in this manner. Destruction efficiencies for hazardous chemicals and pesticides using this technology have been shown to be consistently greater than 99.99%.

Wet-air oxidation is another promising incineration method. Liquid phase organic waste is pumped through a heat exchanger (preheated) and into the reactor. Oxidation occurs at high pressures (300-2000 psi) but low temperatures (400-650 F)--which are easily maintained by the efficient combustion of the organic material. The hot effluent is pumped through the initial heat exchanger; gaseous products are minimal and primarily consist of air and carbon dioxide. This technology can best be used on concentrated waste streams with non-biodegradable or complex organic constituents (pesticides, herbicides, etc.). Thus wastes appropriate for biological treatment should not be used with wet-air oxidation.

Plasma arc torch systems pyrolyze liquid or solid wastes into a combustible gas by contact with a plasma (energized gas) at about 90,000 F. Benefits include the ability to use the exiting gas as a fuel, high efficiency, and few intermediate hazardous waste compounds are produced. Clearly, however, this process is highly energy intensive.

Pyrolysis is a two-stage "thermal conversion" of organic material in a reduced oxygen environment. The first stage occurs at temperatures between 900 and 1600 F, then the second stage takes over and temperatures increase to 1800-3000 F. Inorganic material and metals are formed into an insoluble residue. Nitrogen, sulphur and sodium species are not compatible with pyrolysis.

Although no incineration process is an ultimate solution to hazardous waste treatment, these "alternative" technologies may be able to offer the best means yet. Perhaps in the future, hazardous wastes will be destroyed by one or several of these methods.

The technologies discussed above have been summarized in a table presented on the last page. Indicated treatment efficiencies are general, and in some cases averaged; these technologies cannot be expected to perform in such a manner at any moment in time. There will be discrepancies in these figures due to the characteristics of the waste stream itself, ambient conditions, equipment maintenance, etc. The same can be said for variations in the costs for these technologies; in fact, costs will vary more dramatically than performance for all of them.

It must be remembered that all of these remedial technologies still produce some type of waste stream. In the case of treatment, an aqueous waste, a sludge, and/or a solid effluent will result, often of benign characteristics, but not always. Any hazardous wastes must be disposed of properly. Some sort of ash or solid residue will also result from thermal transformation. In each case, a final disposal product will ultimately require attention.

REFERENCES

1. Association of Bay Area Governments. Proceedings of HAZMACON 86, Hazardous Materials Management Conference and Exhibition. April 29-May 1, 1986.
2. Berkowitz, Joan B., et al. Unit Operations for Treatment of Hazardous Industrial Wastes. Pollution Technology Review no. 47, Noyes Data Corporation, 1978.
3. Dillon, A. P., ed. Pesticide Disposal and Detoxification--Processes and Techniques. Pollution Technology Review no. 81, Noyes Data Corporation, 1981.
4. Hazardous Materials Control Research Institute, National Conference, The Management of Uncontrolled Hazardous Waste Sites. November, 1982, Washington DC.
5. Lehman, John P., ed. Hazardous Waste Disposal. United States Environmental Protection Agency. From the NATO Symposium on Hazardous Waste Disposal, October, 1981, Washington DC.
6. Sittig, Marshall. Incineration of Industrial Hazardous Wastes & Sludges. Pollution Technology Review no. 63, Noyes Data Corporation, 1979.
7. Southern California Hazardous Waste Incineration: A Feasibility Study. California Air Resources Board and South Coast Air Quality Management District, May, 1984.
8. U. S. Environmental Protection Agency. Remedial Action at Waste Disposal Sites. October, 1985.



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

S. R. Larson

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING

A REVIEW OF WASTE MINIMIZATION PRACTICES: IMPLEMENTATION OF THE HAZARDOUS WASTE MANAGEMENT HIERARCHY

Technical Memo No. 6

December 1987

The Task Force has adopted a hazardous waste management hierarchy. The hierarchy (Table 1) is considered a fundamental element of the planning effort. It emphasizes waste minimization and source reduction. This paper presents a discussion of techniques that can be used to reduce the generation of hazardous wastes. The "high end" of the hierarchy, elements above the line in Table 1, will be addressed. Treatment techniques that can also reduce the volume of wastes, have been reviewed previously in Technical Memo No. 5.

The five general techniques used for reducing wastes include:

- Product substitution
- Raw material substitution
- Process modification
- Recycling and reuse (on-site)
- Recycling and reuse (off-site)

Inorder to recycle materials some form of pretreatment may be required. Pretreatment that modifies a material to make it acceptable for recycling is encouraged.

These five waste reduction techniques will be discussed below.

PRODUCT AND RAW MATERIAL SUBSTITUTION

Substitution is one approach to reducing or eliminating the generation of hazardous waste. Shifting to a product that does not result in production of a hazardous material, or does not require hazardous compounds during the manufacturing process is an option to facilitate reduction of hazardous wastes. Examples of substitution used in industry include: replacing cadmium with zinc or other less toxic metals in the metal coating industry, replacing lead and oil based paints with acrylic paints, replacing chlorinated pesticides with pesticides that are not persistent, and replacing solvent cleaners with aqueous cleaners.

Representing City and County Governments of the San Francisco Bay Area

Household products can also result in hazardous wastes. Substituting "household toxics" with products that do not contain hazardous components is becoming a more common practice. Household products that can be replaced by less hazardous products include oven cleaners, drain openers/cleaners, chlorine, ammonia and many others. Attachment 1, an educational brochure used by the Association of Bay Area Governments (ABAG) to advertise household hazardous waste collection programs in Alameda county, contains a reference chart with a more complete listing of potential hazardous waste producing household products and substitutes. As waste minimization becomes a priority applications in both industry and consumer households are becoming a reality. Substitution is one option for minimizing the generation of hazardous wastes.

PROCESS MODIFICATION

Process modification is an alternative to substitution in cases where the raw materials are essential to the finished product, and the finished product itself cannot be substituted or replaced. Process modification is used in industrial situations where both the product and its raw materials are determined to be essential. Both major and minor redesign of manufacturing process techniques can be part of a waste reduction program. The simplest form of process modification is to improve housekeeping. Better housekeeping measures can be easily instituted to reduce spillage. Examples include installing overflow alarms on tanks, keeping aisles clear of obstructions, and keeping raw material containers a safe distance from process equipment. Proper tracking of inventories and returning materials that have exceeded their shelf life expiration dates will reduce the potential for chemicals to degrade. Insuring that proper maintenance procedures are practiced can reduce waste generation.

A number of industries have initiated or are experimenting with major process changes. In the semiconductor industry, negative photoresist has been replaced in some instances, with positive photoresist. Positive photoresist can be removed with a mild alkaline solution while negative photoresist removal requires organic solvents and generates a solvent/heavy metal waste. Paint stripping normally requires use of solvents. The Department of Defense is using a process for paint removal that utilizes plastic spheres that are bombarded against the paint surface and rubs off the paint. The resulting waste is simply paint chips and not a solvent mixture. Other mechanical cleaning techniques can eliminate the need for solvents. In the metal finishing industry, concurrent rinsing is a well demonstrated waste water reduction method. Figure 1 shows how this process works.

RECYCLING AND REUSE

When waste generation is inevitable, it can frequently be recycled or reused. Hazardous waste can be recycled or reused at the location where it is generated (onsite) or it can be shipped to another location (offsite). Most onsite recycling or reuse involves using the waste in the process that originally generated it, reusing the waste in a different process at the same facility, or collecting the waste for use in another marketable product. Onsite recycling or reuse is preferable to offsite recycling and reuse since it eliminates the potential risks involved in transporting wastes.

Examples of onsite recycling and reuse include feedback loops so that wastes can be put back into the process. At a chemical facility in Pittsburg, CA hydrogen chloride gas is recycled back into the process rather than being sent to a scrubber. Cleaning solvents used in the paint industry can sometimes be incorporated into the paint production process. Zinc sludges produced during galvanization processes can be converted to new products: fertilizer and animal feed supplements.

Offsite recycling and reuse are becoming more widely practiced waste reduction techniques. Wastes are transported to a commercial facility where they are processed for distribution on the open market or for return to the original generator. In California, the California Waste Exchange publishes a list of available and wanted hazardous wastes. Industries generating a "wanted" waste stream can use the exchange to identify companies that will use their waste and vice versa. The Department of Health also publishes an annual list of industrial recyclers enabling industries to identify recycling facilities that can accept their waste streams.

THE WASTE REDUCTION PLAN

In order to identify the most advantageous components to a specific waste minimization program, a waste reduction plan is needed. The elements that each plan should cover are outlined in Table 2. (Table 2 was developed by the Ventura County Environmental Health Department.) The five steps include 1) developing an inventory of raw products and waste sources, 2) prioritizing target chemicals, 3) defining alternative process changes, 4) scheduling program implementation, and 5) monitoring and evaluating the program. An effective plan must contain an element that addresses how to measure implementation success. This measurement tool provides important feedback to management and employees on the program and can be used to encourage further waste reduction practices.

CONCLUSION

Waste reduction techniques have been briefly presented. Attachment 2 lists more examples by specific waste type, and Attachment 3 lists examples by specific operations. Further information can be found in the references listed with this paper. The most effective means of managing our hazardous waste is to reduce its production. This paper discusses waste minimization techniques with examples of how they have been implemented in different industries.

REFERENCES

California Waste Exchange, Newsletter/Catalog. DOHS, Alternative Technology Section, Sacramento, CA.

Department of Health Services-Toxic Substances Control Division-Alternative Technology & Policy Department Section. Alternative Technology for Recycling and Treatment of Hazardous Wastes, Biennial Reports. DOHS, Sacramento, CA. 1984 and 1986.

Environmental Defense Fund, California Institute of Public Affairs, Approaches to Source Reduction of Hazardous Waste, 1986.

Sarokin, David J., Muir, Warren R. PhD., Miller, Catherine G. PhD., Sperber, Sebastian R. Cutting Chemical Wastes. Inform, Inc., New York, NY. 1985.

Ventura County Environmental Health Dept., Hazardous Waste Reduction Guidelines for Environmental Health Programs, May 1987.

Table 1

HAZARDOUS WASTE MANAGEMENT HIERARCHY
TECHNIQUES FOR SOURCE REDUCTION AND WASTE MANAGEMENT

1. Product Substitution
 - *shift to product that results in lower hazardous waste output
 2. Raw Material Substitution
 - *shift to less hazardous materials
 - *shift to process materials that result in lower hazardous waste output for same product
 3. Process Modification
 - *lower hazardous waste output from same product and same types of raw materials
 - redesign process
 - improved "housekeeping"
 4. Recycling & Reuse (on site)
 - *lowers net output of waste material
 5. Recycling & Reuse (off site)
 - shared central facilities
 - third party recyclers
 - waste exchanges
-
6. Onsite Treatment
 - neutralization
 - stabilization
 - evaporation ("dewatering")
 - incineration
 7. Offsite Treatment
 - neutralization
 - stabilization
 - evaporation
 - incineration
 8. Disposal
 - residuals repositories

} Pretreatment may occur first

ELEMENTS OF A VOLUME REDUCTION PLAN

I. Inventory: Raw products and waste sources.

- Material/waste balance
- Sources of chemical use and waste generation
- Points of waste discharge
- Chemical profile of waste (why is it hazardous)
- Disposition of wastes and disposal costs

II. Priority Framework

- Review chemical hazards
- Risk Assessment
- Identify criteria for importance
- Prioritize wastes for minimization

III. Alternative Process Description

- Identify Housekeeping/production changes for minimization
- Survey literature and equipment
- Cost estimation (include initial costs, amortization, depreciation, tax rebates, pay back potential)
- Selection of alternatives (prioritize and list conditions for adoption)

IV. Schedule and Targets

- Identify steps or phases for implementation
- Identify tasks and personnel assignments
- Set target dates for completion

V. Monitor and Evaluation

- Identify reporting procedures
- Establish evaluation protocol
- Establish outcome objectives and range of acceptability
- Educate and involve all facility personnel

SOURCE: Ventura County Health Department, 1987

FIGURE 1

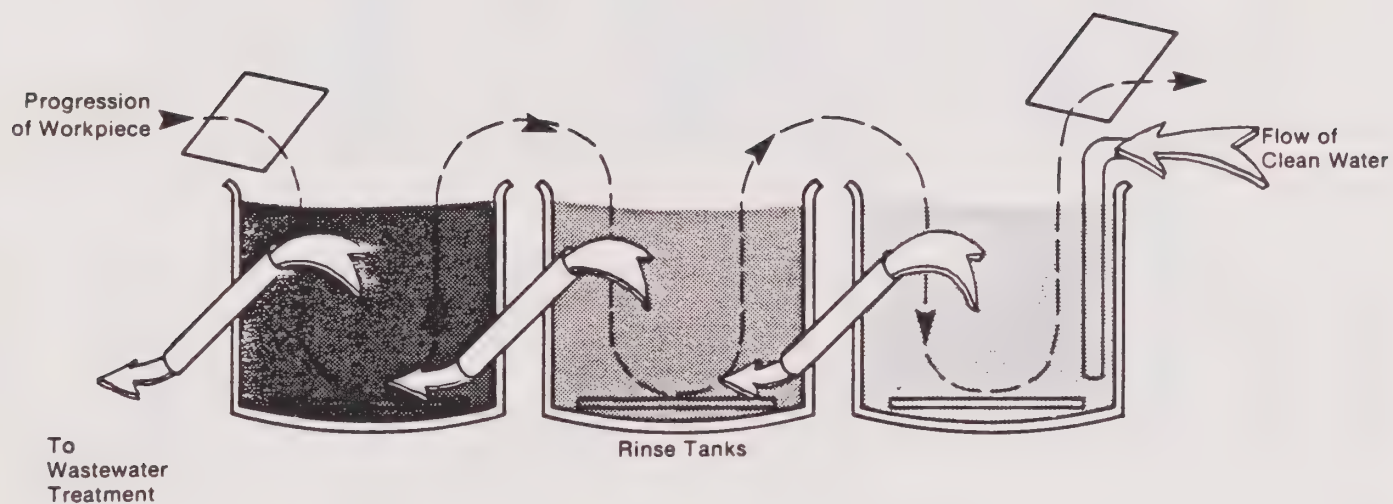


Figure 1 Counter-current Rinsing.

The workpiece is moved from the tank on the left to the tank on the right; rinse water flows in the opposite direction.

Source: EPA

SOURCE: Department of Health Services-Toxic Substances Control Division-Alternative Technology & Policy Department Section. Alternative Technology for Recycling and Treatment of Hazardous Wastes, Biennial Reports. DOHS, Sacramento, CA. 1986.

WASTE REDUCTION METHODOLOGIES

Waste Type	Code	Source Reduction Methods	Commercial* Recyclers	On-Site Treatment/Vendors**
Waste oil & mixed oil	221		DeMenno-Kerdoon Fluid Recycling Svc. Triple J Edgington	Oil/water separators clarification systems oil & grease skimmers Vendors: Samsco Tenco Hydro
Pesticide rinse water	231	Use multiple rinse tanks, install drain boards & drip tanks, recycle & reuse rinse water		Destruction with chlorine or lime. Incineration, carbon adsorption Vendors: GA Technologies Canonie Environmental
Tank bottom waste	241	Determine if hazardous by testing	DeMenno-Kerdoon Systech McAuley Oil Co.	Dewatering, skimming, filtration

* See California Waste Exchange List of Industrial Recyclers

** See Ventura County Waste Reduction Resource Directory

WASTE REDUCTION METHODOLOGIES

Waste Type	Code	Source Reduction Methods	Commercial * Recyclers	On-Site Treatment/Vendors **
Paint sludges	461	Use equipment with low overspray, inspect all parts before painting Use paints without metal pigments	Pacific Coast Lacquer	Pyrolysis - Pollution Control Products Resolver - distillation Solidify by drying
Empty containers 30 gallons or more	512	Use rinsable, and/or recyclable containers, purchase materials in bulk, use pre-weighed packages	Rose Cooperage Waymire	Triple rinse containers
Empty containers 30 gallons or less	513	Use rinsable, and/or recyclable containers, purchase materials in bulk, use pre-weighed packages		Triple rinse containers

WASTE REDUCTION METHODOLOGIES

Waste Type	Code	Source Reduction Methods	Commercial * Recyclers	On-Site Treatment/Vendors **
Drilling mud	521	Determine if hazardous by testing		Dewatering methods Vendors: WMI-West So Mat Bio-Nomic Filtronics Edward & Jones, Inc.
Photochemical, photo processing waste	541		Industrial Silver	Silver recovery probe (electrochemical) Kodak "silver sponge"
Laboratory waste chemicals	551		California Waste Exchange	Neutralization of acids & bases

WASTE REDUCTION METHODOLOGIES

Waste Type	Code	Source Reduction Methods	Commercial * Recyclers	On-Site Treatment/Vendors **
Alkaline solution with metals	121	Install/operate tanks properly, avoid cross-contamination, remove sludge frequently, reduce evaporation with blankets & freeboard	(Metals may be recyclable) World Resources	Neutralization and dewatering, electro-chemical treatment
Alkaline solution without metals	122	Avoid cross-contamination, increase bath life, lower concentration of bath life, segregate waste streams		Neutralization Vendors: WMI-West Filtrionics, Inc. Allied Corp.
Aqueous solution with metals	132	Avoid cross-contamination, increase bath life, lower concentration of bath life, segregate waste streams	(Metals may be recyclable) Chem West International Metal Liquid Chem. Corp.	Dewatering, electro-chemical treatment Vendors: Somat WMI-West Star Systems

WASTE REDUCTION METHODOLOGIES

Waste Type	Code	Source Reduction Methods	Commercial* Recyclers	On-Site Treatment/Vendors**
Off-specification, aged & surplus inorganics	141	Use "just-in-time" ordering, smaller quantities, frequent supply analysis Test to determine usefulness	California Waste Exchange	
Metal sludge	171		Depends on concentration of metals	Dewatering, Electrochemical treatment Vendors: WMI-West Somat Corp. Alan Engineering Chem Link
Solvents Halogenated Oxygenated Hydrocarbon	211 212 213	Use aqueous detergents for cleaning, powder coating in place of solvent-based finishes, seal-less pumps to avoid leakage, automation to reduce human error, change equipment settings to reduce consumption, reduce evaporation with free-board and blankets, conserve energy & water, use plastic bead blasting for paint stripping	OSCO, Romic, Rho-Chem, Van Water & Rogers Baron-Blakeslee	Distillation, incineration filtration Vendors: Resolv-r, Ampro, Interel

WASTE REDUCTION METHODOLOGIES

Waste Type	Code	Source Reduction Methods	Commercial * Recyclers	On-Site Treatment/Vendors **
Contaminated soil (from leaks & spills)	611	Install splash guards and dry boards, prevent tank overflow, use bellow sealed valves, install spill basins, seal-less pumps, secondary containment, plant maintenance, employee training		Aeration, biodegradation, on-site recovery, air stripping Vendors: NEPCCO, Aquifer Remediation Systems
Acid solution with metals	111	Increase plating solution bath life, lower concen- tration of plating bath, use in-line recovery, segregate all waste streams	(Metal sludges may be recyclable after dewatering) Chem West International Metal Liquid Chem. Corp.	Neutralization, dewatering Vendors: WMI-West Somat Star Systems



JACOBS ENGINEERING GROUP INC.

251 SOUTH LAKE AVENUE, PASADENA, CALIFORNIA 91101-3063
TELEPHONE (213) 681-3781 (818) 449-2171 TELEX 67-5458 JACOBSCORP PSD

WASTE SOURCE REDUCTION AND RECYCLING MEASURES IN:

- o Parts Cleaning Operations
- o Equipment Cleaning Operations
- o Materials Handling, Storage, Transfer
- o Good Operating Practices
- o Coating Operations

WASTE REDUCTION OPTIONS FOR PARTS CLEANING OPERATIONS

Waste	Source/Origin	Waste Reduction Measures	Remarks
Spent solvent	Contaminated solvent from parts cleaning operations	• Use water-soluble cutting fluids instead of oil-based fluids • Use peel coatings in place of protective oils • Use aqueous cleaners • Use aqueous paint stripping solutions • Use cryogenic stripping • Use bead blasting for paint stripping • Use multi-stage countercurrent cleaning • Maintain solvent quality • Prevent cross-contamination • Prevent drag-in from other processes • Prompt removal of sludge from the tank • Standardize solvent usage	This could eliminate the need for solvent cleaning Same as above Solvent usage is eliminated Solvent usage is eliminated Solvent usage is eliminated Solvent usage is eliminated Prevent solvent from going acid
Air emissions	Solvent leakage from degreasers and cold tanks	• Use roll-type covers, not hinged covers • Increase freeboard height • Install freeboard chillers • Avoid disturbing vapor space in the tank • Use silhouette entry covers • Proper equipment layout • Avoid rapid insertion and removal of items • Avoid "piston effect" when objects are inserted into the tank	A single, larger waste that is more amenable to recycling 24 to 50% reduction in emissions 39% reduction in solvent emissions The speed that items are put into the tank should be less than 11 feet/min. Cross-sectional area of the item should be less than 50% of tank area
Rinse water	Water rinse to remove solvent carried out with the parts leaving the cleaning tank	• Reduce solvent dragout by proper design and operation of rack system • Install air jets to blow parts dry • Use fog nozzles on rinse tanks • Proper design and operation of barrel system • Use countercurrent rinse tanks • Use water sprays on rinse tanks	The dragout can be 0.4 gal/1000 sqft, versus 24 for poorly drained parts Water flow is 0.1 gpm for 3 counter rinses compared to 10 gpm for a single rinse tank More efficient rinsing is achieved

Jacobs Engineering Group

WASTE REDUCTION OPTIONS FOR EQUIPMENT CLEANING OPERATIONS

Waste	Source/Origin	Waste Reduction Measures	Remarks
Spent solvent- or inorganic-based cleaning solutions	Tank cleaning operations	• Maximize dedication of process equipment • Avoid unnecessary cleaning • Proper production scheduling • Closed storage and transfer systems • Provide sufficient drain time for liquids • Lining the equipment to prevent clingage • "Pigging" process lines • Use "flow-over" method of cleaning • Use high-pressure spray nozzles • Use countercurrent rinsing • Use clean-in-place systems • Clean equipment immediately after use	Scaling and drying up can be prevented Minimizes leftover material Reduce clingage Minimizes solvent consumption
		• Reuse cleanup solvent several times • Rework cleanup solvent into useful products • Segregate wastes by solvent type • Standardize solvent usage • Reclaim solvent by distillation	Prevent hardening of scales that require increased degree of cleaning
Spent acidic solution wastewater sludges	Heat exchanger cleaning	• Use bypass control or pumped recycle to maintain turbulence during turnaround • Use smooth heat exchange surfaces • Use on-stream cleaning techniques • Use hydroblasting over chemical cleaning where possible	Onsite or offsite recycling Electroplated or Teflon® tubes "Superscrubber", for example

WASTE REDUCTION OPTIONS IN MATERIALS HANDLING, STORAGE, AND TRANSFER

Waste/Source	Waste Reduction Measures	Remarks
Material/waste tracking and inventory control	• Avoid over-purchasing • Accept raw material only after inspection • Ensure that inventory quantity does not go to waste • Ensure that no containers stay in inventory longer than a specific period • Review material procurement specifications • Return expired material to supplier • Validate shelf-life expiration dates • Test outdated material for effectiveness • Eliminate shelf-life requirements for stable compounds • Conduct frequent inventory checks • Use computer-assisted plant inventory system • Conduct periodic materials tracking • Proper labeling of all containers • Set up manned stations for dispensing chemicals and collecting wastes	These procedures are employed to find areas where the waste minimization efforts are to be concentrated
Clingage	• Use large containers instead of small containers whenever possible • Use containers with same height-to-diameter ratio to minimize wetted area • Empty drums and containers thoroughly before cleaning or disposal	

Jacobs Engineering Group

WASTE REDUCTION OPTIONS IN MATERIALS HANDLING, STORAGE, AND TRANSFER

Waste/Source	Waste Reduction Measures	Remarks
Spills and leaks	• Store containers in such a way as to allow for visual inspection for corrosion and leaks • Stack containers in a way to minimize the chance of tipping, puncturing, or breaking • Prevent concrete "sweating" by raising the drum off storage areas • Maintain MSDSs to correctly handle spill situations • Provide adequate lighting in the storage area • Maintain a clean, even surface in transportation areas • Keep aisles clear of obstruction • Maintain distance between incompatible chemicals • Maintain distance between different types of chemicals to prevent cross-contamination • Avoid stacking containers against process equipment • Follow manufacturers' suggestions on the storage and handling of all raw materials • Insulation and inspection of electric circuitry for corrosion and potential sparking	

Jacobs Engineering Group

WASTE REDUCTION THROUGH GOOD OPERATING PRACTICES

Good Operating Practice	Program Ingredients	Remarks
Waste minimization programs	• Form a team of qualified individuals • Establish practical short-term and long-term goals • Allocate resources and budget for the program • Identify and select options to minimize waste • Periodically monitor the program's effectiveness	These programs are conducted to reduce waste in a facility
Environmental audits/reviews	• Assemble pertinent documents • Conduct environmental process reviews • Conduct a procedure evaluation • Carry out a site inspection • Report on and follow up on the findings	These audits are conducted to monitor compliance with regulations
Loss prevention programs	• Establish Spill Prevention, Control, and Countermeasures (SPCC) plans • Conduct hazard assessment in the design and operating phases • Use properly designed tanks and vessels only for their intended purposes • Install overflow alarms for all tanks and vessels • Maintain physical integrity of all tanks and vessels • Set up written procedures for all loading/unloading and transfer operations • Install secondary containment areas • Forbid operators to bypass interlocks, alarms, or significantly alter setpoints without authorization • Isolate equipment or process lines that leak or are not in service • Use seal-less pumps • Use bellows-seal valves • Document all spillage • Perform overall material balances and estimate the quantity and dollar value of all losses • Use floating-roof tanks for VOC storage • Use special conservation vents on fixed roof tanks • Use vapor recovery systems	SPCC plans are required by law.
Waste Segregation	• Prevent mixing of hazardous wastes with non-hazardous wastes • Isolate hazardous wastes by contaminant • Isolate liquid wastes from solid wastes	These measures can result in lower waste haulage volumes and easier disposal of the hazardous wastes.

Jacobs Engineering Group

WASTE REDUCTION THROUGH GOOD OPERATING PRACTICES

Good Operating Practice	Program Ingredients	Remarks
Preventive maintenance programs	• Use equipment data cards on equipment location, characteristics, and maintenance • Maintain a master preventive maintenance (PM) schedule • Deferred PM reports on equipment • Maintain equipment history cards • Maintain equipment breakdown reports • Keep vendor maintenance manuals handy • Maintain a manual or computerized repair history file	These programs are conducted to cut production costs and decrease equipment downtime, in addition to preventing waste releases due to equipment failure.
Training/Awareness-building program	• Provide training for - Safe operation of the equipment - Proper materials handling - Economic and environmental ramifications of hazardous waste generation and disposal - Detecting releases of hazardous materials - Emergency procedures - Use of safety gear	These programs are conducted to reduce occupational health and safety hazards, in addition to reducing waste generation due to operator or procedural errors.
Effective supervision	• Closer supervision may improve production efficiency and reduce inadvertent waste generation • Management by objectives (MBO), with goals for waste reduction	Increased opportunity for early detection of mistakes. Better coordination among the various parts of an overall operation.
Employee participation	• "Quality circles" (free forums between employees and supervisors) can identify ways to reduce waste • Solicit employee suggestions for waste reduction ideas	Employees who intimately understand the operations can identify ways to reduce waste
Production scheduling/planning	• Maximize batch size • Dedicate equipment to a single product • Alter batch sequencing to minimize cleaning frequency (light-to-dark batch sequence, for example) • Clean equipment promptly	Altering production schedule can have a major impact on waste minimization
Cost accounting/allocation	• Cost accounting done for all waste streams leaving the facilities • Allocate waste treatment and disposal costs to the operations that generate the waste	Allocating costs to the waste-producing operations will give them an incentive to cut their wastes

WASTE REDUCTION OPTIONS FOR COATING OPERATIONS

Waste	Source/Origin	Waste Reduction Measures	Remarks
Coating overspray	Coating material that fails to reach the object being coated	• Maintain 50% overlap between spray pattern • Maintain 6" - 8" distance between spray gun and the workpiece • Maintain a gun speed of about 250 feet/minute • Hold gun perpendicular to the surface • Trigger gun and the beginning and end of each pass • Proper training of operators • Use robots for spraying • Avoid excessive air pressure for coating atomization • Recycle overspray • Use electrostatic spray systems • Use air-assisted airless spray guns in place of air-spray guns	The coated object does not look streaked and wastage of coating material is avoided. If the spray gun is arched 45° the overspray can be as high as 65% By air pressure adjustment, overspray can be reduced to 40% Overspray can be reduced by 40% Increases transfer efficiency
Stripping wastes	Coating removal from parts before applying a new coat	• Avoid adding excess thinner • Use abrasive media stripping • Use bead-blasting for paint stripping • Use cryogenic stripping • Use caustic stripping solutions • Clean coating equipment after each use	Reduces stripping wastes due to rework Solvent usage is eliminated Solvent usage is eliminated Solvent usage is eliminated Solvent usage is eliminated
Solvent emissions	Evaporative losses from process equipment and coated parts	• Keep solvent soak tanks away from heat sources • Use high-solids formulations • Use powder coatings • Use water-based formulations	Lower usage of solvents Avoids solvent usage Avoids solvent usage
Equipment cleanup wastes	Process equipment cleaning with solvents	• Light-to-dark batch sequencing • Produce large batches of similarly coated objects instead of small batches of differently coated items • Isolate solvent-based paint spray booths from water-based paint spray booths • Proper labeling of all containers • Standardize solvent usage • Segregate waste streams	Results in a larger, more recyclable waste Improves recyclability
Spills	Inadvertent release of process liquids	• Close floor drains to encourage the use of dry cleanup methods	Useful when collection and rework is not done with spills



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

Shih-Liang Tu

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING

IMPLEMENTABLE COUNTY PLANS

ISSUE PAPER NO. 1

August 1987

OVERVIEW

This technical memorandum describes the content of, and local governments' responsibilities in, county hazardous wastes management planning (CHWMP) mandated by (AB 2948 chapter 1504 of the Statutes of 1986). It also delineates the desired goals and objectives to be achieved by CHWMPs as well as the consequences of non-compliance by local governments.

GOVERNMENTS' RESPONSIBILITIES IN CHWMPs

According to the California Department of Health Services (DHS), the objective of the new legislation is to ensure that safe, effective, and economic facilities for the management of hazardous waste are available when they are needed, and that these facilities are operated in a manner that protects the public health and the environment. It provides an opportunity for California's local and State governments to assess and accommodate the current and future needs for facilities to manage hazardous waste (Guidelines for the Preparation of Hazardous Waste Management Plans, DHS, June 1987).

County governments are expected to develop and implement the new program mandated by the Law. Each county is to plan for the management and reduction of hazardous wastes. The Law provides counties with authority and state financial support to develop extensive processes for countywide hazardous waste management and facilities siting. Resulting CHWMPs are to be finished by December of 1988.

Under the AB 2948, each county is responsible for hazardous waste management planning to meet the needs of industries and households within its jurisdiction. CHWMPs should account for all waste generated within the geographical boundaries of the county, including those from Indian reservations and Federal and State lands and facilities. If sites of hazardous waste management facilities are in another jurisdiction over which the county has no authority, statements of understanding and acceptance from the affected jurisdiction need to be included within the plan. It is also expected that counties, cities, and councils of governments would fully collaborate during the preparation of their CHWMPs to generate the most environmentally sound and economical solutions to hazardous waste management issues.

AB 2948 ostensibly is directed at facilitating the siting and permitting of hazardous waste facilities. Yet there is a list of elements which are required within a county hazardous waste management plan:

1. Analysis of the hazardous waste stream generated in the county.
2. Description of existing facilities and capacities.
3. Analysis of the potential for recycling hazardous waste.
4. Consideration of the need to manage hazardous waste produced by business and households.
5. Determination of the need for additional hazardous waste facilities.
6. Identification of hazardous waste facilities that can be expanded and sites for new facilities.
7. Statement of goals, objectives and policies for siting new facilities and management of wastes with a schedule to implement the plan.

Thus a question can arise as to how many waste management activities, other than siting, a county may commit to implementation.

IMPLICATION FOR COUNTIES

The degree to which counties commit to implementation of their hazardous waste management plans should be proportional to the level of need within the respective counties. However, there are always legitimate conflicting demands upon county resources. How do counties select a level of implementation?

There are several implications in AB 2948 that can lead to expectations of fully featured programs. These are listed below, in no particular order:

- (a) The final county plan must be submitted to DHS for review and approval.
- (b) The DHS will make determinations of compliance with the guidelines.

- (c) An approved plan, in a county with a documented need, will identify specific sites suitable for a facility, or siting criteria and general areas where the criteria might be applicable.
- (d) Agreements with other counties to manager hazardous waste must be documented.
- (e) The final county plan must have been approved by cities within the county according to preset formula.
- (f) Amendments to an adopted county hazardous waste plan require approval by DHS and cities within the county.
- (g) A county may tax or impose a user fee upon a new offsite hazardous waste facility.
- (h) DHS guidelines provide extensive discussions of waste recycling, source reduction and small generation programs.
- (i) Approved county plans must be incorporated by reference into the general plan or enacted by ordinance.
- (j) New hazardous waste facilities must be consistent with county hazardous waste management plans.

Therefore, what is the essence of AB 2948? Are counties buying into a process which forces them to develop and implement complete programs? Will counties guarantee the availability of facilities to be constructed for unmet needs? Or, can counties make key elements of the plan contingent upon availability of funding? Could siting criteria be adopted that would effectively preclude construction of any new facilities? Could we have a do nothing plan?

ASSESSMENT

There are no obvious, direct penalties for failure to complete and adopt an approved county hazardous waste management plan. Also, there are no obvious penalties for producing a plan which is approved but constrains the development of new facilities. However, the pressures to produce an "honest effort" plan incorporating as many practical features as possible are very high.

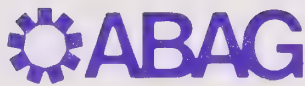
First, the county plans are being produced in a climate of high public concern. Newspapers, television and radio frequently have stories about abandoned waste sites, chemical spills, contaminated drinking water and birth defects or cancer. Responsible county officials recognize the threat hazardous wastes pose to human health and the environment. Hazardous waste management therefore becomes as valid a societal and governmental objective as police protection, fire suppression, restaurant inspection or sewage treatment.

Second, although the final contents of each county's plan are not specified by AB 2948 in detail, the planning process is constrained. There are requirements for extensive involvement by agencies, industry, environmental groups and the general citizenry. The hazardous waste planning process will be an extremely open and public process. It can be presumed that various constituencies will endeavor to shape the plan to reflect their needs. In an open public process, each county plan is likely to reflect the serious commitments to implementation on a fixed schedule.

Third, and not the least, is the issue of local control. A primary governmental function, unique to local governments, is control over land use decisions. This includes land use permits for hazardous waste treatment, storage or disposal facilities. AB 2948 includes provisions that a local land use permit rejection (or permit conditions) may be appealed by a hazardous waste facility developer. The appeal would be made to the Governor and, if accepted as legitimate, would be assigned for hearing by a seven-member Appeal Board. Barring procedural issues, the Appeal Board may order a reversal of the local agency's permit ruling because of the existence or absence of a county hazardous waste plan. In the absence of a hazardous waste plan, the Appeal Board would make the decision of permit consistency with the General Plan. With the existence of a county hazardous waste plan, the Appeal Board would judge the land use permit for consistency with the hazardous waste plan. If the permit conditions were found to be onerous and restrictive, or did not adequately protect the public health, safety and welfare, the local land use decision could be reversed. Many of the supporting materials from the planning process, such as waste generation rates, needs assessment, and siting criteria would likely influence the State's decision.

It is evident that a reasonable, well-thought out hazardous waste management plan provides a very good defense of local government authority.

Finally, a careful review of AB 2948 reveals that the county hazardous waste planning program is essentially a siting program. While counties are required, under AB 2948 and the Guidelines, to review and assess recycling, source reduction, small generator programs and the like; counties are not required to directly implement any of these programs. Individual counties may choose to select one or several of these waste reduction programs in the interest of public health, environmental protection, or reducing the need for new treatment or disposal facilities. The role of county participation is likely to be as facilitator, with private industry actually carrying out the programs; and the county role will be influenced by the availability of funding. It is unlikely that counties will own or operate treatment and disposal facilities. It is more likely that general sites would be identified, or siting criteria chosen, that would open the door for private enterprise facilities of a capacity closely matching the projected needs.



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

S.R. Larson

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING

ALTERNATIVES TO LAND DISPOSAL:

A HAZARDOUS WASTE MANAGEMENT HIERARCHY

ISSUE PAPER NO. 2

October 1987

BACKGROUND

The Department of Health Services (DHS) guidelines along with AB 2948 stress the importance of hazardous waste reduction and treatment efforts. Alternatives to land disposal must be addressed in the county and regional hazardous waste management plans. This paper proposes a method of ranking hazardous waste management methods by preference of techniques based on their relative degree of impact on the environment. The purpose of this paper is to present a Hazardous Waste Management Hierarchy for consideration as policy by the Task Force.

To briefly review; the Federal government, the State of California and many local governments have adopted policy initiatives and regulatory programs to encourage the reduction of hazardous waste volumes. The 1984 Amendments to the Resource Conservation and Recovery Act (RCRA) contains the Federal mandate for hazardous waste reduction efforts. AB 2948 and the DHS guidelines clearly indicate the importance of the hazardous waste minimization element in the plans for future hazardous waste management. Land disposal restrictions, at both Federal and State levels, require that new alternatives be pursued. Hazardous waste reduction is environmentally sound and can be economically feasible.

A HAZARDOUS WASTE MANAGEMENT HIERARCHY

Table 1 presents a hazardous waste management hierarchy. The hierarchy is arranged with those waste management techniques which have the least potential environmental and health impact at the top. The potential impact becomes greater as we move down the hierarchy. Thus substituting a production material so that less hazardous waste is produced would be preferable to treating (i.e., neutralizing, evaporating, etc.) a hazardous waste. Those elements identified above the line are actual waste reduction techniques. Those below the line represent treatment methods. Whenever

feasible, utilization of methods towards the top of the list are the preferred alternatives. The hierarchy prioritizes waste management techniques, emphasizing methods that minimize waste rather than treatment and residuals disposal.

DISCUSSION

Adopting a waste minimization policy is the first step towards acknowledging the significance of waste reduction efforts for planning hazardous waste reduction programs. Since the public health and the environment would be best served by limiting or decreasing the need for hazardous waste facilities, the Task Force must consider adopting such a policy. In fact, the Task Force may also want to consider adopting target reduction goals by specific waste streams or industry. Technical Memo No. 5 on treatment methodologies briefly reviews reduction capabilities by various treatment groups. Other data is also being developed to make determinations on future possible reduction levels by implementing the hierarchy. Although, there is an element of uncertainty in projection figures, these data can be used as a guide.

The advantages of adopting a management hierarchy policy are several and include:

- 1) Clearly defines the Task Force policy on waste minimization.
- 2) Gives waste minimization efforts a high priority indicating their importance and relevance to the planning effort.
- 3) May help to reduce the need for siting new hazardous waste management facilities.

CONCLUSION

The purpose of this paper is to present a hazardous waste management hierarchy as a policy direction for the Task Force to consider. Advantages of adopting a hazardous waste management hierarchy are presented.

TABLE 1

HAZARDOUS WASTE MANAGEMENT HIERARCHY
TECHNIQUES FOR SOURCE REDUCTION AND WASTE MANAGEMENT

1. Product Substitution
 - *shift to product that results in lower hazardous waste output
 2. Raw Material Substitution
 - *shift to less hazardous materials
 - *shift to process materials that result in lower hazardous waste output for same product
 3. Process Modification
 - *lower hazardous waste output from same product and same types of raw materials
 - redesign process
 - improved "housekeeping"
 4. Recycling & Reuse (on site)
 - *lowers net output of waste material
 5. Recycling & Reuse (off site)
 - shared central facilities
 - third party recyclers
 - waste exchanges
-
6. Onsite Treatment
 - neutralization
 - stabilization
 - evaporation ("dewatering")
 - incineration
 7. Offsite Treatment
 - neutralization
 - stabilization
 - evaporation
 - incineration
 8. Disposal
 - residuals repositories



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

S.R. Larson

REGIONAL HAZARDOUS WASTE MANAGEMENT PLANNING

PROPOSED PUBLIC INVOLVEMENT PROGRAM

ISSUE PAPER NO. 3

OCTOBER 1987

INTRODUCTION

The Tanner legislation (AB 2948) and the Department of Health Services (DHS) guidelines require that public education and participation programs be an element of both the Regional and the County Hazardous Waste Management Planning processes. These efforts will give the public an opportunity to voice concerns to the planning bodies and will also allow the planning bodies to educate the public on some of the issues. Clearly, an informed and involved public should ultimately lead to a more supportive public. The ABAG proposed course of action for enlisting public involvement with the Regional Hazardous Waste Plan is outlined below.

NEWSLETTER

The ABAG Regional Hazardous Waste Reporter will be distributed between Task Force meetings. The Reporter, specifically developed to meet this need, will be a brief (approximately one-two pages) review of news items relevant to the planning effort. It will include:

- *Education on hazardous waste issues
- *Progress report on the Regional plan
- *Summary and results of the immediately previous Task Force meeting
- *Schedule for the next Task Force meeting and a summary of the agenda

We propose to distribute the Reporter to the following groups:

- *All Task Force members
- *All County Tanner Committee Members
- *All ABAG membership representatives

*Environmental and Public Interest Groups

*Industry Associations

* News Media

OTHER OUTREACH EFFORTS

ABAG's Around the Bay brochure will publish highlights of the planning process on a regular basis. Our executive board will be kept informed through monthly notices. Additional press releases will be initiated if it appears that they are desirable.

All Task Force meetings are open to the public and each meeting will have an open agenda item for public participation. This will allow the public an opportunity to bring issues and concerns directly to the Task Force. ABAG will provide notification of this opportunity through the newsletter.

CONCLUSION

Implementing the described program should meet the intent of the public participation element of the planning process. Since the time frame for plan development is extremely tight, we propose to implement this approach immediately.

S. R. Larson

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING TASK FORCE

REGIONAL PLAN OBJECTIVES

Issue Paper No. 4

November 1987
Revised December 1987

The overall goal of the Regional Hazardous Waste Management Plan is to develop a comprehensive waste management system that protects public health, safety and welfare while maintaining the economic viability of the Bay Area. This goal is to be carried out by specifying a regional plan that accounts for all hazardous wastes generated in the nine county Bay Area. The plan must meet the intent of AB 2948 (Tanner, 1986), and the Department of Health Services (DHS) guidelines while addressing regional needs and priorities.

The Regional Plan shall meet the following objectives:

- 1) Develop siting factors and criteria for use in evaluating potential hazardous waste management facility sites for use throughout the region.
- 2) Incorporate the hazardous waste management hierarchy (as previously adopted; Issue Paper No. 2) as a basic element of the plan. The plan shall outline waste reduction programs that can be implemented at the local level.
- 3) Quantify current hazardous waste generation and catalogue handling practices for the region.
- 4) Project future generation rates and proposed future management practices.
- 5) Ensure the use and development of hazardous waste management practices which are proven safe and effective.
- 6) Provide incentives for research to develop more efficient waste treatment technologies.
- 7) Ensure that the public has ample opportunity to be involved in the planning process.
- 8) Develop a process for future updates of the plan.

This memo describes a set of potential objectives to guide Task Force planning efforts. Staff recommends that clearly defined objectives be adopted by the Task Force.

S. R. Larson

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING TASK FORCE

SITING CRITERIA: THE IMPORTANCE OF REGIONAL CONSENSUS

Issue Paper No. 5

December 1987

The criteria used for siting hazardous waste management facilities needs to be carefully planned to insure the safe and most efficient use of regional resources. A regional consensus on the siting criteria determination will greatly increase the authority of individual local governments to enforce widely accepted siting standards. The purpose of this paper is two fold; first, to present arguments for developing regional criteria that will be used at the local level and second, to point out the relevance of considering broader based criteria that addresses elements in addition to the technical aspects of physical location.

The siting criteria determination for hazardous waste management facilities is a major element of the planning process. These criteria will form the basis for siting future hazardous waste management facilities. Region-wide agreement on siting criteria will give local government more control. By specifying criteria in the regional plan that has been developed for use at the local level and has been accepted by Bay Area local governments, the criteria will provide collective strength and a measure of collective reasonableness. It is more likely that criteria developed with regional agreement will be upheld in the likely event of an appeals process. It will be more difficult to oppose criteria that have been adopted in many local general plans than criteria that are only used by one local jurisdiction.

Regionally acceptable criteria does not mean that local government cannot add to or tailor the criteria; they can be used as a foundation or as a stand alone set of criteria. The more closely local adopted criteria resemble the regional criteria the more weight the collective strength advantage yields.

Local government control can also be enhanced by developing and adopting a broader set of siting criteria. This can be realized because the siting criteria gives local government an opportunity to define those elements or factors it wishes to have considered during the siting process. Since siting criteria (as defined by local or regional government) identifies those factors that will be considered in determining what will or will not be sited, it is extremely important to include factors that are determined to be

important considerations of the siting process. The importance of identifying critical factors and outlining how they shall be measured cannot be overemphasized.

The narrow definition, as found in the Department of Health Services (DHS) guidelines includes only physical location factors, while broader criteria could include social, economic, and other impacts as well. It is not technical physical location factors that determine the outcome of siting a proposed hazardous waste facility. Other, more political elements come under intense scrutiny and are by far the more difficult areas that must be addressed. Therefore, it is to our advantage to give some consideration of these other factors and to include reasonable guidelines for addressing these concerns.

Examples of broader criteria that address some of these types of concerns and we may want to consider, in addition to physical location, include:

- *Types of waste to be managed
- *Acceptability of in-region wastes versus out-of-region wastes
- *Restrictions on wastes from out of the region or county
- *Facility size or amount of waste managed
- *Distance waste shall be transported to the facility
- *Effect on local economy

By addressing social, economic and other impacts the set of criteria have the most potential for determining future hazardous waste management activities in the region. By reaching a consensus on the criteria we add to this potential.

Policy 4:

Former disposal sites and other contaminated sites that require clean-up (such as soils) should be managed on-site if possible.

Discussion

The activity of moving wastes from a past disposal site to a new site should be discouraged. Operators of these sites should be encouraged to mitigate problems using on-site techniques, such as containment, bioreclamation, soil venting with contaminant recovery, and other on-site treatment procedures when these are effective. Transportation risks are reduced. Planning for future disposal capacity needs becomes simpler. Small quantities of clean-up wastes that can be easily removed may be transported for off-site treatment and disposal but on-site treatment should always be considered first.

Policy 5:

Potential exposure of populations to hazardous waste should be minimized whenever possible. This includes consideration of the location of facilities (buffer zones, etc.), transportation of wastes and level of hazard presented by a particular waste stream. By implementing the hazardous waste management hierarchy exposure potential will be reduced. When wastes must be transported they should be routed on safe roads that are accessible to emergency response teams.

Discussion

Potential exposure of populations to hazardous wastes shall be reduced by implementation of the hazardous waste management hierarchy. This plan supports reducing the amounts and hazard of waste in the Bay Area generally, and particularly on the Bay Area's highways. In cases where waste must be transported this plan supports transportation of wastes in areas that are accessible to emergency response teams.

Local and state hazardous materials response units (fire departments, highway patrol, health departments, other emergency service units) should be included in planning efforts to determine the best routes for transportation of hazardous wastes. The local hazardous materials contingency plan should address response to incidents in local jurisdictions.

Policy 6:

This plan encourages the development of a variety of hazardous waste management strategies and encourages the siting of needed hazardous waste management facilities to safely manage wastes generated in the region. The plan provides government and private industry with a hazardous waste management planning framework to help define and meet the hazardous waste management needs of the Bay Area.

Discussion

With the transition from landfill disposal to hazardous waste management facilities this management plan encourages the development of facilities to meet regional and local needs. This plan recommends development of a regional network of management facilities.

In general, this plan supports new hazardous waste management facilities that are located in close proximity to the industries serviced. Since this may not be practical, feasible, or the safest alternative for all cases this plan also recognizes that some regional serving facilities will be necessary. These facilities should be equitably distributed throughout the region. A plan to assure equitable distribution of management facilities throughout the region must be developed.

Hazardous waste management facility planning is viewed in this plan as a branching process that should result in a network of facilities. This plan proposes a network of hazardous waste management facilities to meet the regions waste management needs with local transfer and recycling facilities located closest to generators feeding into fewer treatment facilities that again feed into fewer incineration and repository facilities. The recycling and transfer facilities should be encouraged to meet the needs of local (city or multi-city) communities. These facilities are compatible with other industrial land uses and provide a mechanism to combine wastes from smaller generators providing economies of scale. In combination with other generators they provide the "feedstock" to the next level of management: treatment facilities. Treatment facilities should be part of the system meeting city, county and possibly even regional needs depending on the size of a particular development. Treatment facilities will likely need to service local transfer facilities and generator industries from a wider geographic area. These facilities are also encouraged to develop in industrial areas as close to the waste generators as is practically possible. Since repositories are so difficult to site, so onerous to maintain and operate and require such a large investment to insure the proposal's credibility, they will need much larger service areas and should only be developed to meet both regional and state needs.

Policy 7:

Small quantity generators and household hazardous waste generators are recognized as groups needing more attention. The current system for managing the waste streams generated by these groups is inadequate. Local transfer and recycling facilities that provide services to these waste generating groups should be encouraged. The permitting process for SQGs and household waste transfer and recycling facilities need to be consolidated at the state and federal level while protecting local interests.

Educational programs are needed to make these generators aware of the problems and the solutions. This plan encourages the development of public education and technical assistance programs combined with more convenient and cost effective alternatives for handling wastes generated by these groups. The level of promotional, educational and assistance programs to be developed and implemented at the local level will need to be defined by local governments.

Discussion

SQG and household wastes are not adequately addressed under the current system. Although these wastes only make up an estimated ***% of the total Bay Area hazardous waste stream these wastes do pose an environmental threat. There are two major areas that must be addressed inorder to deal with this problem adequately. These are:

- 1) Facilities to manage these wastes must be developed that can provide services to these generators that are economical and convenient. It is not enough to pass regulations that make it illegal to dispose of household hazardous waste in the garbage can. An alternative to illegal garbage disposal or sewerage of hazardous wastes must be made available to households and SQG businesses.

- 2) These generators need to be educated about how to avoid producing hazardous waste by implementing the principles encompassed by the hazardous waste management hierarchy. In the cases where generating the waste cannot be avoided proper handling and disposal practice guidelines must be made readily available.

Systems to manage these wastes must be established. Financial incentives for companies to develop waste management businesses aimed at addressing these waste streams should be available (e.g., low interest loans). The generators of these wastes must be educated on legal and safe practices.

Policy 8:

Funding sources to assist local governments in financing efforts to more effectively manage hazardous wastes must be identified and implemented. Along with accepting the responsibility to manage hazardous wastes local governments must have access to funds.

Discussion

Local governments need financial support in order to effectively implement hazardous waste programs. The Governor's Task Force on Toxics, Waste and Technology (May, 1986) recommended "a mix of broadly based fees and general revenues to provide stability, along with narrowly focused fees and waste-end taxes to provide incentives for waste reduction." This plan supports a mix of funding sources to generate the revenues needed to effectively manage hazardous wastes. Sources must be identified and implemented so that local government programs will receive needed support.

S. R. Larson

BAY AREA HAZARDOUS WASTE MANAGEMENT PLAN

DRAFT REGIONAL POLICIES

Issue Paper No. 6

January 1988, Revised February 1988

The purpose of this paper is to present policy statements to the Task Force to consider for inclusion in the Bay Area Hazardous Waste Management Plan. Policy statements are presented and followed by a justification discussion section. The policies are not presented in any particular order, though we may want to prioritize them once we have identified those to be included.

POLICY AND DISCUSSION STATEMENTS

Policy 1:

This plan calls upon local Bay Area governments to work together to solve hazardous waste problems that cannot be solved by local governments alone. The plan recognizes the interdependence of local governments and environmental agencies in the San Francisco Bay Area and recommends a regional approach to solving hazardous waste problems.

Discussion

One of the primary objectives of this planning effort is for each county to define its own hazardous waste needs assuring that adequate capacity is available to manage all the waste generated in the county. In reality, most counties, if not all counties, will need to rely on management facilities that are located outside of their own jurisdictions. It is unlikely that any one county will be able to provide all the hazardous waste management facility services needed to manage the variety of waste streams produced within the county. Interdependence with other counties is and will continue to be necessary. Local governments must work together.

Policy 2:

The Bay Area Hazardous Waste Management Plan (BAHWMP) promotes waste minimization. The hazardous waste management hierarchy should be implemented immediately by all levels of government and private industry.

Discussion

Hazardous waste minimization is in the San Francisco Bay Area Region's and the State's best interest. Waste minimization was identified as a priority direction early in the planning process. The Task Force adopted the hazardous waste management hierarchy to prioritize management practices with the most emphasis being given to those practices that reduce the quantity of hazardous waste.

The major forces currently driving waste minimization efforts are regulatory requirements and economics. Economic incentives include higher costs for transportation, treatment, disposal and insurance. Regulatory incentives include the 1990 ban on land disposal of untreated wastes. The larger generators are more likely to have the resources to minimize waste production. The smaller companies may need technical and financial assistance to decrease hazardous waste production.

The local land use permitting process for new hazardous waste generating businesses could include conditions requiring source reduction and recycling programs. A public education program for current generators (especially the small quantity generators) is a potential mechanism that could be considered by local government to encourage more waste reduction. This plan encourages local government to implement programs that promote waste minimization activities. As a first step local governments are urged to adopt and implement the hazardous waste management hierarchy in the management of their own hazardous materials.

Policy 3:

On-site treatment of hazardous wastes is encouraged above off-site treatment.

Discussion

The hazardous waste management hierarchy identifies on-site treatment of hazardous waste as a higher priority than off-site treatment. By initiating on-site treatment transportation risks are reduced. On-site treatment also encourages the producer of the waste to become more familiar with the process producing the waste, to view the actual cost of the waste stream as a part of the manufacturing process or service, and may provide further incentive for more waste reduction activities.

S. R. Larson

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING TASK FORCE

REGIONAL PLAN SITING GOALS AND CRITERIA

Issue Paper No. 7

January, 1988

The siting criteria subcommittee met on January 6. The purpose of this meeting was to set goals and criteria for siting hazardous waste management facilities.

The goals and the criteria have been developed to address siting issues covering both private and public sector hazardous waste management facilities. The committee found that the issues surrounding siting of new hazardous waste management facilities are complex and difficult to fully address. These siting goals and criteria are a first attempt to try and define issues and offer solutions. The purpose of this paper is to present the goals (formerly referred to as objectives) and a brief discussion describing the background and reasons for the committee's recommendations.

GOAL 1: Protect public health and safety

Protection of public health and safety covers a broad range of issues that can be addressed by the siting criteria. Minimizing the potential for public exposure to hazardous waste will protect the public health and safety. This goal includes transportation of hazardous waste (minimization of accidents and providing adequate routes) along with proximity of management facilities to populations and protection of neighbors.

GOAL 2: Protect the environment including land, groundwater, surface water and air by mitigating environmental impacts so that a net environmental benefit will result.

The proper management of hazardous wastes should be enhanced by siting needed new hazardous waste management facilities. These facilities shall be sited in such a manner that potential negative environmental impacts (including water land and air) will be mitigated thus minimizing environmental degradation. Siting of new facilities shall result in a net environmental benefit because they will provide needed hazardous waste management capacity.

GOAL 3: Protect the economic base of the Bay Area

By managing hazardous waste safely the Bay Area economy will be enhanced. Siting new hazardous waste management facilities to meet the hazardous waste needs of the area will provide the Bay Area with a competitive edge and add to the desirability of businesses to locate in the Bay Area.

GOAL 4: Public participation is an essential element of the siting process and shall be encouraged to the maximum extent feasible.

Public participation must be a component of facility siting. A siting proposal will only be successful when public concerns and fears are addressed. The public must have ample opportunity to participate so that their questions about the safety of a facility are adequately addressed.

GOAL 5: Ensure that only "needed" facilities will be sited, balancing the concentration of facilities with risk.

This goal is difficult to define. Possibly it should be included as criteria rather than as a goal. No matter in which context it is addressed certain questions must be answered. The term "needed" must be clarified. Defining "need" based on a needs assessment is not a reasonable approach since need assessments lack credibility because they usually support a particular point of view. We must define the area to be covered by the "need"- do we mean state needs, regional needs or county needs. This issue is closely related to the question of equitable distribution of facilities. Possibly a formula that weighs many different variables and includes "need" will be the answer. Such a formula could include many variables (ex: the potential for public exposure, economic impact, environmental impacts etc.).

S. R. Larson and K. K. Moy

BAY AREA HAZARDOUS WASTE MANAGEMENT PLANNING TASK FORCE
INTERCOUNTY AGREEMENTS AND LOCAL AUTHORITY: IS LOCAL CONTROL POSSIBLE?
Issue Paper No. 8
February, 1988

Over the last several months we have been listening to discussions and reviewing information on the authority of local governments to control hazardous wastes within their area of jurisdiction. Several questions of salient importance to these discussions have come to our attention. We requested our attorney to help clarify the issues and to identify those areas in the various laws that may have impact upon our recommended course of action. The purpose of this paper is to outline the questions, define the problem areas, describe ABAGs position and recommend a course of action for Bay Area counties.

THE QUESTIONS

- 1) What authority do local governments have to restrict the operations of new or existing private sector hazardous waste facilities?
- 2) What authority do local governments have to limit the types and numbers of new private sector hazardous waste management facilities through the land use permitting process?
- 3) When does local government authority conflict with the interstate commerce clause of the U. S. Constitution?
- 4) Can local government place restrictions on hazardous waste accepted at new private sector management facilities by type, quantity or point of origin?
- 5) Why should counties participate in inter-county agreements? What advantages are there to inter-county agreements?

QUESTION DISCUSSION

QUESTION 1

The operations of hazardous waste facilities are heavily regulated by the state and federal governments. Any attempt by local governments to regulate hazardous waste facility operations must first withstand a challenge based on the argument that the State and Federal regulatory scheme pre-empts local regulation. To that end, local regulation should be based on a state enabling statute, i.e. Planning and Zoning Law (Gov't C. Sec. 65100, et seq) and the

Tanner Bill (AB 2948, 1986). Thus, regulation of hazardous waste facilities is achieved through conditions imposed on the operator during the land use permitting process.

From a practical perspective the authority of a local government to impose land use permit conditions on new hazardous waste management facilities is limited. On existing hazardous waste management facilities, local governments have no such authority unless there is a change in use of the hazardous waste management facility. Land use conditions must be reasonably related to the siting of the facility. The types of conditions typically imposed by land use permitting agencies include routes of entry into a facility, limitations on volume by specifying the number of trucks that can go into a facility, and other limitations that can be imposed because they are identified as mitigation measures during the EIR/EIS review process.

QUESTION 2

The location, type, number, and size of hazardous waste facilities can be regulated based on actual land use considerations, e.g., environmental impacts on surrounding uses, traffic, pollution, etc.. For example, regulations affecting operational capacity which are reasonably related to the land use decision can be imposed upon a new facility. They can be achieved by access limitations or in other ways but cannot be an outright volume limitation that has no basis in the actual land use determination. For example, a county might wish to limit the volume of hazardous waste that can be treated at a proposed facility within the county to a level equal to the amount of waste generated within that county. Although there is no guarantee that only waste generated within the county would be treated at the facility the county would like the upper capacity limit to be at this level. Our assessment is that a county cannot carry out this capacity requirement based on the reasoning that it only generates this volume of waste. However, astute county planners may be able to identify other justifications that would allow the county to achieve this effect, e.g., traffic flow and capacity, pollutant output, waste water treatment plant capacity, seismic safety, etc.. Thus even if the county general plan states that facilities will only be developed to the capacity level required by county generators this policy could not be upheld unless other circumstances justify the condition.

QUESTION 3

Local government authority conflicts with the interstate commerce clause when the interstate flow of hazardous waste management services can arguably be affected. Restricting acceptability of waste flows based on point of origin or direct regulation by differential pricing of wastes based on point of origin would in our opinion probably impact "free flow of services" in a manner which would violate the interstate commerce clause.

QUESTION 4

As described above in question 2 types and quantities of waste can be restricted providing the restriction is reasonable and based on actual land use considerations. Origin-of-waste constraints as a use permit condition on a private sector operation have little likelihood of being upheld because they have nothing to do with the local jurisdictions land use decision for that facility. No matter where the waste comes from or how the waste is produced the impacts created by the decision to permit the management facility is the same. In addition, state law can directly override such restrictions independent of commerce clause consideration. For example, the DHS can specify in its operating permit for the facility that waste be accepted from any geographic area.

QUESTION 5

Since the authority of local governments to control hazardous waste is confined to land use considerations peculiar to each local jurisdiction and there is no mechanism for inter-county land use regulations, it is our assessment at this time that intercounty agreements do not offer local governments any means of directly regulating the operations of hazardous waste facilities. However, inter-county agreements could facilitate local land use decisions on waste facilities through the exchange of information about current and anticipated management facility need, available capacity and coordination of siting decisions by local governments.

If the land use permit process does not allow local government to guarantee treatment of hazardous waste generated within its boundaries or to effect an agreement with other jurisdictions for such treatment, is there another mechanism which might do so? We believe that providing economic incentives can significantly improve the effectiveness of limited land use based operational regulations. County governments, facility operators and hazardous waste generators are all parties that financial incentives could impact. The 10% local tax on hazardous waste facilities authorized by the Tanner Bill would be a primary funding source for such incentives. If the tax proved to not be large enough or is unavailable to jurisdictions without facilities other funding sources may need to be considered.

A financial inducement system designed to provide incentive for management practices (ex. waste reduction) that local governments consider important could be developed along the following lines:

An inter-county agreement defines and categorizes management methods or levels of waste reduction into preferential groups;

- Group 1 - most preferred, 100% rebate on tax
- Group 2 - less preferred, 60% rebate on tax
- Group 3 - least preferred, no rebate .

The waste facility operator, the generator or possibly both is given a rebate on the 10% tax by the taxing county which in turn is reimbursed by the county

where the waste originated. The amount of the rebate would depend in which preferential group the generators from the county of origin were classified. Since generators would be categorized into a mix of preferential groupings a weighting system to determine the rebate would need to be applied. The criteria used to define the preferential groups could be developed on a regional basis so all counties would have similar criteria. The generator would be encouraged by the facility operator or the tax incentive itself (depending on how the system was setup) to practice waste reduction and to follow the county defined preferred methods for managing wastes.

Another definition of preferential groups might be based on the point of origin of the waste. For example treatment of wastes from a county with a reciprocal treatment agreement with the county in which the facility is located might be encouraged through the rebate system.

There are several advantages to this dual land use/financial incentive approach or similar mechanisms. First, it gives counties a means to encourage waste management practices that they consider important. Second it gives counties a way to encourage coordinated treatment of waste streams generated within a region. Third, the criteria for categorizing the preferred groups would be determined by all counties in the region providing coordinated incentives for reduction of waste streams by all waste generating businesses within the region.

There are disadvantages also. Counties with no or limited hazardous waste management facilities within their boundaries must locate the funds to pay the rebate to generators within their county or to management facilities located elsewhere. However, the problem of identifying funding sources must be faced, and solved, in any event if counties want to impact hazardous waste management activities. Obtaining inter-county agreement on defining the criteria may be difficult. The maximum rebates affordable by a county may not be enough of an incentive for facility owners to significantly restrict operations to preferred waste streams or for generators to use the preferred methods. These concepts warrant further research, consideration, and refinement. They appear to provide potential for local governments to influence hazardous waste management practices used in their jurisdictions.

A P P E N D I X 6

WASTE GENERATION PROJECTIONS DATA FOR THE YEAR 2000 BY COUNTY AND FOR THE SAN FRANCISCO BAY REGION

All data in this appendix are arranged alphabetically by county and for the region. Data for each county and the region include:

Hazardous Waste Generation in 1986 and Projections for the Year 2000 by:

- Waste number;
- Waste group;
- SIC-code;
- Industrial Sector;
- SIC-code and Waste group;

Hazardous Waste Generation Projections by Industrial Sector for the Year 2000
Using Three Reduction Scenarios (no reduction, 10% and 40% reduction);

and Hazardous Waste Generation Projections by Waste Group for the Year 2000
Using Three Reduction Scenarios.

9/1/88

COUNTY: ALAMEDA

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	20	1.60		1.64	
	26	0.02		0.02	
	27	19.50		39.04	
	28	142.20		224.34	
	32	0.29		0.36	
	34	4222.84		4650.95	
	35	81.78		222.04	
	36	503.08		1411.39	
	37	1.12		1.38	
	38	1.11		3.47	
	42	0.22		0.32	
	45	2.29		4.03	
	48	18.19		38.36	
	49	1.22		1.51	
	51	0.90		1.44	
	73	215.13		505.54	
	82	0.22		0.31	
	97	3.74		4.04	
	99	12.39		12.39	
		Total:	5227.84	Total:	7122.57
112	28	0.22		0.35	
	32	55.87		68.40	
	33	3.95		5.05	
	34	245.42		270.30	
	35	0.29		0.79	
	36	11.76		32.99	
	42	0.36		0.52	
	49	1.34		1.66	
	50	0.02		0.03	
	73	0.54		1.27	
	96	0.62		0.67	
	97	7.15		7.72	
	99	9.34		9.34	
		Total:	336.88	Total:	399.09
113	28	0.00		0.00	
	36	0.18		0.50	
	38	0.04		0.12	
	45	0.05		0.09	
	49	0.12		0.15	
	50	0.15		0.24	
	61	0.22		0.37	
	73	1.04		2.44	
	97	18.92		20.42	
	99	8.82		8.82	
		Total:	29.54	Total:	33.15
121	28	73.84		116.49	
	32	0.31		0.38	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	34	24.90		27.42	
	35	25.31		68.72	
	36	4.84		13.58	
	37	2.10		2.59	
	40	14.44		25.40	
	49	0.60		0.74	
	50	0.60		0.96	
	51	9.19		14.73	
	73	666.80		1566.93	
	97	24.38		26.31	
	99	127.73		127.73	
		Total:	975.04	Total:	1991.98
122	27	0.22		0.44	
	28	20.85		32.89	
	29	3.35		4.98	
	35	0.22		0.60	
	36	122.87		344.71	
	37	8.90		10.99	
	38	0.44		1.37	
	41	191.13		336.21	
	42	2.47		3.54	
	45	3.21		5.65	
	73	21.94		51.56	
	82	0.67		0.94	
	94	2.91		3.14	
	97	186.73		201.52	
	99	21.10		21.10	
		Total:	587.01	Total:	1019.64
123	32	0.05		0.06	
	34	139.39		153.52	
	35	0.16		0.43	
	36	192.71		540.65	
	42	0.89		1.28	
	48	0.12		0.25	
	51	7.23		11.59	
	61	0.22		0.37	
	73	0.22		0.52	
	75	0.02		0.02	
	97	52.29		56.43	
	99	22.01		22.01	
		Total:	415.31	Total:	787.13
131	28	340.67		537.45	
	34	80.05		88.17	
	35	14.59		39.61	
	36	801.66		2249.06	
	42	33.39		47.92	
	51	0.45		0.72	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	97	0.21		0.23	
	99	3.54		3.54	
		Total:	1274.56	Total:	2966.70
132	20	6.25		6.42	
	28	168.20		265.36	
	34	146.70		161.57	
	35	65.23		177.10	
	36	183.65		515.23	
	37	6.25		7.72	
	38	0.41		1.28	
	45	0.22		0.39	
	49	21.01		26.08	
	73	30.57		71.84	
	75	1.04		1.19	
	97	101.97		110.05	
		Total:	731.50	Total:	1344.23
133	29	22.76		33.84	
	34	14.17		15.61	
	37	35.02		43.23	
	38	0.91		2.84	
	51	7.33		11.75	
	73	0.36		0.85	
	96	20.85		22.50	
	99	0.35		0.35	
		Total:	101.75	Total:	130.97
134	17	3.64		6.45	
	27	34.59		69.26	
	28	3.84		6.06	
	29	4.40		6.54	
	37	902.52		1114.17	
	41	40.23		70.77	
	73	76.68		180.19	
	82	0.62		0.87	
	97	79.62		85.93	
		Total:	1146.14	Total:	1540.24
135	26	34.18		37.06	
	28	0.81		1.28	
	32	8.34		10.21	
	42	0.90		1.29	
	49	151.27		187.76	
	75	0.83		0.95	
	92	0.20		0.22	
	97	4.59		4.95	
	99	4.17		4.17	
		Total:	205.29	Total:	247.89

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
141	28	7.34		11.58	
	30	1.17		1.52	
	37	6.00		7.41	
	38	0.08		0.25	
	42	1.67		2.40	
	73	0.04		0.09	
	80	0.22		0.27	
	95	0.30		0.32	
	96	0.20		0.22	
	97	114.68		123.76	
	99	0.04		0.04	
		Total:	131.74	Total:	147.86
151	17	50.33		0.00	
	20	38.46		0.00	
	26	6.08		0.00	
	27	0.27		0.00	
	28	296.84		0.00	
	32	619.36		0.00	
	35	4.42		0.00	
	37	17.85		0.00	
	38	0.00		0.00	
	41	5.05		0.00	
	42	320.62		0.00	
	49	18.56		0.00	
	73	330.33		0.00	
	79	0.42		0.00	
	80	107.38		0.00	
	82	491.35		0.00	
	84	0.12		0.00	
	91	2.82		0.00	
	92	2.52		0.00	
	94	27.80		0.00	
	95	470.98		0.00	
	96	262.86		0.00	
	97	250.94		0.00	
	99	57.72		0.00	
		Total:	3383.08	Total:	0.00
171	33	36.68		46.90	
	34	85.43		94.09	
	35	5.50		14.93	
	36	200.40		562.22	
	37	537.95		664.10	
	51	0.84		1.35	
	72	669.06		763.99	
	76	0.22		0.25	
	97	0.50		0.54	
		Total:	1536.58	Total:	2148.37

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
172	32	0.07		0.09	
	36	1.90		5.33	
	37	11.57		14.28	
	49	0.75		0.93	
	73	0.02		0.05	
	97	0.51		0.55	
		Total:	14.82	Total:	21.23
181	28	146.72		231.47	
	32	14.62		17.90	
	33	5.52		7.06	
	34	65.76		72.43	
	35	4.40		11.95	
	36	9.31		26.12	
	37	634.38		783.15	
	38	3.96		12.37	
	42	0.88		1.26	
	49	2.18		2.71	
	50	0.77		1.23	
	51	0.84		1.35	
	72	89.80		102.54	
	73	56.60		133.01	
	75	0.25		0.29	
	82	1.68		2.36	
	97	57.22		61.75	
	99	114.87		114.87	
		Total:	1209.76	Total:	1583.82
211	20	0.66		0.68	
	26	0.22		0.24	
	27	8.57		17.16	
	28	19.30		30.45	
	29	9.03		13.43	
	32	0.85		1.04	
	33	0.62		0.79	
	34	2.44		2.69	
	35	15.07		40.92	
	36	13.06		36.64	
	37	3.36		4.15	
	38	0.88		2.75	
	42	255.71		366.95	
	45	2.65		4.66	
	48	0.22		0.46	
	49	0.85		1.06	
	50	119.11		190.87	
	51	2.24		3.59	
	56	0.66		0.95	
	72	23.87		27.26	
	73	252.20		592.65	
	75	0.44		0.50	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	80	3.98		4.88	
	91	0.45		0.49	
	97	26.72		28.84	
	99	186.28		186.28	
		Total:	949.44	Total:	1560.38
212	17	0.68		1.21	
	20	44.34		45.56	
	27	0.22		0.44	
	28	34.97		55.17	
	34	16.10		17.73	
	35	1.07		2.91	
	36	5.67		15.91	
	37	410.60		506.89	
	38	4.26		13.31	
	42	2.25		3.23	
	45	0.73		1.28	
	48	0.45		0.95	
	50	27.72		44.42	
	51	16.15		25.88	
	73	76.26		179.21	
	75	0.22		0.25	
	80	0.58		0.71	
	97	5.12		5.53	
	99	4.15		4.15	
		Total:	651.54	Total:	924.74
213	27	1.17		2.34	
	28	17.65		27.85	
	30	2.29		2.97	
	32	4.79		5.86	
	35	4.37		11.86	
	36	20.36		57.12	
	37	1.89		2.33	
	38	0.42		1.31	
	41	3.33		5.86	
	42	1.34		1.92	
	48	7.50		15.82	
	49	2.52		3.13	
	51	2.46		3.94	
	73	2231.63		5244.16	
	82	14.59		20.49	
	91	4.17		4.50	
	97	30.67		33.10	
	99	83.69		83.69	
		Total:	2434.84	Total:	5528.25
214	8	0.90		0.76	
	17	4.41		7.82	
	20	181.31		186.30	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
---------	----------	--------------------------	------------------	--------------------------	------------------

25		33.52		36.35	
26		0.45		0.49	
27		32.17		64.41	
28		1240.30		1956.73	
29		0.22		0.33	
30		114.49		148.36	
32		5.73		7.01	
34		797.88		878.77	
35		7.73		20.99	
36		72.68		203.90	
37		361.21		445.92	
38		11.60		36.25	
39		3.34		10.44	
41		11.77		20.70	
42		59.32		85.13	
45		10.82		19.03	
49		2.04		2.53	
50		8.06		12.92	
51		32.52		52.11	
52		1.57		2.26	
55		28.78		41.41	
73		191.68		450.43	
75		112.91		128.93	
76		1.56		1.78	
80		0.80		0.98	
82		1.65		2.32	
91		1.52		1.64	
94		0.10		0.11	
97		74.16		80.03	
99		63.92		63.92	
		Total:	3471.12	Total:	4971.06

221	17	0.20		0.35	
	20	59.36		60.99	
	27	16.75		33.54	
	28	105.26		166.06	
	29	13544.54		20140.62	
	30	80.11		103.81	
	32	92.07		112.71	
	33	11.04		14.12	
	34	38.92		42.87	
	35	13.29		36.08	
	36	10.01		28.08	
	37	121.73		150.28	
	38	1.24		3.87	
	40	210.65		370.54	
	41	10.32		18.15	
	42	0.22		0.32	
	45	5.62		9.89	
	48	20.01		42.20	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	197.23		244.81	
	50	1.83		2.93	
	51	2.09		3.35	
	55	3.75		5.40	
	73	250.51		588.68	
	76	0.45		0.51	
	80	0.89		1.09	
	82	42.77		60.08	
	91	31.94		34.47	
	92	1.99		2.15	
	95	1.75		1.89	
	96	9.62		10.38	
	97	410.32		442.83	
	99	411.73		411.73	
		Total:	15708.21	Total:	23144.78
222	27	0.41		0.82	
	28	786.79		1241.26	
	29	9.98		14.84	
	32	29.06		35.58	
	34	54.77		60.32	
	36	0.45		1.26	
	41	246.65		433.87	
	42	21.01		30.15	
	44	56.28		99.00	
	48	14.37		30.30	
	49	2.68		3.33	
	51	8.12		13.01	
	52	14.59		20.99	
	55	0.12		0.17	
	72	22.76		25.99	
	73	12.50		29.37	
	82	7.50		10.53	
	91	3.33		3.59	
	94	1.56		1.68	
	96	37.62		40.60	
	97	29.91		32.28	
	99	11.87		11.87	
		Total:	1372.33	Total:	2140.81
223	20	153.54		157.76	
	28	87.67		138.31	
	29	25.27		37.58	
	30	0.41		0.53	
	32	4.60		5.63	
	34	4.21		4.64	
	35	15.13		41.08	
	40	25.26		44.43	
	41	1.66		2.92	
	45	8.02		14.11	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	12.61		15.65	
	73	3.00		7.05	
	80	0.18		0.22	
	96	32.34		34.90	
	97	209.46		226.05	
	99	41.97		41.97	
	Total:		625.33	Total:	772.83
232	30	0.15		0.19	
	49	0.10		0.12	
	52	1.92		2.76	
	91	0.14		0.15	
	97	0.20		0.22	
	Total:		2.51	Total:	3.44
241	28	115.43		182.11	
	29	309.56		460.31	
	30	0.11		0.14	
	32	15.85		19.40	
	36	14.31		40.15	
	41	6.25		10.99	
	42	63.53		91.17	
	48	37.63		79.35	
	49	2.08		2.58	
	75	90.04		102.81	
	80	1.25		1.53	
	82	41.25		57.94	
	91	5.83		6.29	
	96	22.91		24.72	
	97	17.78		19.19	
	99	20.73		20.73	
	Total:		764.54	Total:	1119.41
251	34	0.68		0.75	
	Total:		0.68	Total:	0.75
252	36	87.30		244.92	
	73	0.50		1.17	
	Total:		87.80	Total:	246.09
261	28	42.02		66.29	
	32	242.20		296.50	
	34	17.18		18.92	
	37	43.86		54.15	
	40	0.20		0.35	
	44	0.02		0.04	
	49	2997.91		3721.17	
	50	1847.71		2960.83	
	65	37.07		60.65	
	73	198.29		465.97	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	80	2.53		3.10	
	82	37.89		53.22	
	96	1.73		1.87	
	97	276.01		297.88	
	99	8.33		8.33	
		Total:	5752.95	Total:	8009.27
271	28	1.75		2.76	
	37	22.45		27.71	
	73	4.12		9.68	
		Total:	28.32	Total:	40.15
272	20	121.69		125.04	
	28	5.03		7.94	
	32	0.10		0.12	
	34	52.70		58.04	
	36	0.56		1.57	
	45	0.67		1.18	
	49	0.08		0.10	
	73	17.24		40.51	
	97	1.39		1.50	
		Total:	199.46	Total:	236.00
281	20	51.80		53.23	
	28	16.96		26.76	
	35	0.10		0.27	
	37	1.27		1.57	
	97	1.82		1.96	
	99	2.47		2.47	
		Total:	74.42	Total:	86.26
291	28	275.46		434.57	
	34	1.83		2.02	
	42	0.22		0.32	
	80	0.04		0.05	
	97	82.46		88.99	
	99	33.21		33.21	
		Total:	393.22	Total:	559.16
311	80	0.20		0.25	
		Total:	0.20	Total:	0.25
321	34	1.35		1.49	
	92	0.45		0.49	
		Total:	1.80	Total:	1.98
322	73	0.30		0.70	
	80	11.68		14.32	
		Total:	11.98	Total:	15.02

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
331	28	12.42		19.59	
	30	0.45		0.58	
	34	16.05		17.68	
	37	4.22		5.21	
	42	1.40		2.01	
	45	1.30		2.29	
	49	0.70		0.87	
	73	1.73		4.07	
	80	0.72		0.88	
	91	0.90		0.97	
	95	0.30		0.32	
	97	18.07		19.50	
	99	3.33		3.33	
		Total:	61.59	Total:	77.30
341	28	0.22		0.35	
	32	1.14		1.40	
	35	0.74		2.01	
	37	4.86		6.00	
	42	1.36		1.95	
	73	0.46		1.08	
	95	0.66		0.71	
	97	2.00		2.16	
		Total:	11.44	Total:	15.66
342	28	53.10		83.77	
	30	0.22		0.29	
	34	1.18		1.30	
	37	7.35		9.07	
	55	3.38		4.86	
	97	0.41		0.44	
		Total:	65.64	Total:	99.73
343	27	14.59		29.21	
	28	51.29		80.92	
	29	28.30		42.08	
	30	11.66		15.11	
	36	0.22		0.62	
	37	106.54		131.52	
	39	0.12		0.37	
	45	2.06		3.62	
	49	1.78		2.21	
	50	17.51		28.06	
	51	7.09		11.36	
	73	49.36		115.99	
	80	0.45		0.55	
	82	0.15		0.21	
	95	0.10		0.11	
	96	2.46		2.65	
	97	48.54		52.39	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	99	0.45		0.45	
		Total:	342.67	Total:	517.43
351	32	0.68		0.83	
	38	1.60		5.00	
		Total:	2.28	Total:	5.83
352	28	318.09		501.83	
	30	1.20		1.56	
	34	715.20		787.71	
	35	0.24		0.65	
	36	20.53		57.60	
	37	391.49		483.30	
	38	2.50		7.81	
	42	2.02		2.90	
	48	0.35		0.74	
	49	9.64		11.97	
	50	0.86		1.38	
	52	0.50		0.72	
	73	80.21		188.49	
	75	0.75		0.86	
	80	0.10		0.12	
	94	0.63		0.68	
	97	150.72		162.66	
	99	17.59		17.59	
		Total:	1712.62	Total:	2228.57
411	51	13.48		21.60	
		Total:	13.48	Total:	21.60
421	36	39.02		109.47	
	37	60.63		74.85	
	97	477.37		515.19	
		Total:	577.02	Total:	699.51
431	37	57.30		70.74	
	99	9.59		9.59	
		Total:	66.89	Total:	80.33
451	34	12.20		13.44	
	35	2.45		6.65	
	36	3.62		10.16	
	38	0.38		1.19	
	48	0.18		0.38	
	50	1.32		2.12	
	51	5.86		9.39	
	99	0.68		0.68	
		Total:	26.69	Total:	44.01
461	20	22.69		23.31	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	25	9.90		10.74	
	28	1069.93		1687.95	
	30	3.37		4.37	
	32	0.41		0.50	
	34	72.71		80.08	
	35	1.72		4.67	
	36	10.52		29.51	
	37	551.91		681.34	
	39	0.45		1.41	
	42	1.36		1.95	
	48	2.29		4.83	
	49	9.13		11.33	
	51	0.25		0.40	
	75	1.70		1.94	
	82	5.81		8.16	
	96	14.97		16.16	
	97	151.45		163.45	
	99	84.46		84.46	
		Total:	2015.03	Total:	2816.56
491	27	1.35		2.70	
	28	66.30		104.60	
	29	0.22		0.33	
	30	2.28		2.95	
	34	248.34		273.52	
	37	0.15		0.19	
	72	22.76		25.99	
	73	2.12		4.98	
		Total:	343.52	Total:	415.26
512	20	48.66		50.00	
	27	0.25		0.50	
	28	114.29		180.31	
	32	102.92		126.00	
	35	1.70		4.62	
	36	3.02		8.47	
	37	409.33		505.32	
	49	1.18		1.46	
	50	47.12		75.51	
	51	29.37		47.06	
	55	41.70		60.01	
	73	139.46		327.72	
	80	0.05		0.06	
	82	55.61		78.11	
	91	0.21		0.23	
	96	1.73		1.87	
	97	130.89		141.26	
	99	0.10		0.10	
		Total:	1127.59	Total:	1608.61

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
513	20	1.82		1.87	
	27	0.10		0.20	
	28	179.69		283.48	
	35	0.64		1.74	
	36	3.45		9.68	
	41	0.12		0.21	
	42	0.68		0.98	
	49	10.15		12.60	
	91	1.20		1.30	
	97	160.13		172.82	
	99	15.17		15.17	
		Total:	373.15	Total:	500.05
521	30	1.15		1.49	
	55	2.52		3.63	
	97	0.09		0.10	
		Total:	3.76	Total:	5.22
541	36	2.23		6.26	
	42	0.22		0.32	
	49	0.07		0.09	
	51	0.22		0.35	
	61	0.44		0.75	
	73	7.07		16.61	
	97	2.80		3.02	
	99	0.96		0.96	
		Total:	14.01	Total:	28.36
551	26	0.07		0.08	
	28	26.02		41.05	
	34	0.22		0.24	
	35	0.74		2.01	
	36	2.96		8.30	
	38	1.10		3.44	
	42	2.21		3.17	
	49	0.90		1.12	
	52	0.45		0.65	
	73	12.77		30.01	
	80	0.81		0.99	
	82	16.31		22.91	
	91	0.32		0.35	
	94	0.44		0.47	
	96	0.05		0.05	
	97	0.23		0.25	
	99	11.30		11.30	
		Total:	76.90	Total:	126.39
561	20	33.76		34.69	
	28	197.42		311.46	
	49	0.15		0.19	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	97	6.04		6.52	
		Total:	237.37	Total:	352.86
571	32	34.54		42.28	
	33	912.45		1166.74	
		Total:	946.99	Total:	1209.02
581	28	174.59		275.44	
	82	0.01		0.01	
		Total:	174.60	Total:	275.45
591	28	8.08		12.75	
	33	308.35		394.28	
	34	1424.10		1568.48	
	97	266.22		287.31	
		Total:	2006.75	Total:	2262.82
611	17	20.21		0.00	
	28	546.01		0.00	
	32	261.21		0.00	
	33	107.01		0.00	
	34	125.56		0.00	
	37	303.53		0.00	
	41	851.67		0.00	
	42	28.70		0.00	
	49	107.98		0.00	
	51	16.85		0.00	
	73	299.16		0.00	
	80	0.35		0.00	
	82	2.94		0.00	
	91	3.60		0.00	
	92	5.89		0.00	
	99	126.37		0.00	
		Total:	2807.04	Total:	0.00
612	44	2.30		4.05	
	49	0.82		1.02	
	80	9.26		11.36	
	91	12.66		13.66	
	97	0.13		0.14	
		Total:	25.17	Total:	30.23
711	34	1.25		1.38	
	36	3.12		8.75	
	42	26.72		38.34	
	99	6.25		6.25	
		Total:	37.34	Total:	54.72
725	36	0.08		0.22	
	49	0.03		0.04	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	82	0.38		0.53	
	97	0.19		0.21	
		Total:	0.68	Total:	1.00
731	34	2.23		2.46	
	49	197.19		244.76	
	50	4.66		7.47	
	96	1.09		1.18	
	97	10.23		11.04	
	99	3.10		3.10	
		Total:	218.50	Total:	270.01
741	28	1.14		1.80	
	34	2.05		2.26	
	42	51.77		74.29	
	80	0.74		0.91	
		Total:	55.70	Total:	79.26
791	42	0.35		0.50	
		Total:	0.35	Total:	0.50
			-----		-----
		Total:	63182.30	Total:	84671.79

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	15708.21		23144.78	
	223	625.33		772.83	
		Total:	16333.54	Total:	23917.61
HALOGENATED SOLVENTS	211	949.44		1560.38	
	741	55.70		79.26	
		Total:	1005.14	Total:	1639.64
NON-HALOGENATED SOLVENTS	212	651.54		924.74	
	213	2434.84		5528.25	
	214	3471.12		4971.06	
		Total:	6557.50	Total:	11424.05
ORGANIC LIQUIDS	133	101.75		130.97	
	134	1146.14		1540.24	
	341	11.44		15.66	
	342	65.64		99.73	
	343	342.67		517.43	
		Total:	1667.64	Total:	2304.03
PESTICIDES	232	2.51		3.44	
		Total:	2.51	Total:	3.44
DIOXINS	261	5752.95		8009.27	
	731	218.50		270.01	
		Total:	5971.45	Total:	8279.28
OILY SLUDGES	222	1372.33		2140.81	
	352	1712.62		2228.57	
		Total:	3084.95	Total:	4369.38
HALOGENATED ORGANIC SLUDGES & SOLIDS	251	0.68		0.75	
	351	2.28		5.83	
	451	26.69		44.01	
		Total:	29.65	Total:	50.59
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	764.54		1119.41	
	252	87.80		246.09	
	321	1.80		1.98	
	491	343.52		415.26	
	571	946.99		1209.02	
		Total:	2144.65	Total:	2991.76
DYE & PAINT SLUDGES AND RESINS	271	28.32		40.15	
	272	199.46		236.00	
	281	74.42		86.26	
	291	393.22		559.16	
	461	2015.03		2816.56	
		Total:	2710.45	Total:	3738.13

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
METAL-CONTAINING SLUDGES	171	1536.58		2148.37	
		Total:	1536.58	Total:	2148.37
METAL-CONTAINING LIQUIDS	111	5227.84		7122.57	
	121	975.04		1991.98	
	132	731.50		1344.23	
	725	0.68		1.00	
		Total:	6935.06	Total:	10459.78
CYANIDE & METAL LIQUIDS	711	37.34		54.72	
		Total:	37.34	Total:	54.72
NON-METALLIC INORGANIC LIQUIDS	112	336.88		399.09	
	113	29.54		33.15	
	122	587.01		1019.64	
	123	415.31		787.13	
	131	1274.56		2966.70	
	135	205.29		247.89	
	791	0.35		0.50	
		Total:	2848.94	Total:	5454.10
NON-METALLIC INORGANIC SLUDGES	411	13.48		21.60	
	421	577.02		699.51	
	431	66.89		80.33	
	521	3.76		5.22	
		Total:	661.15	Total:	806.66
SOIL	611	2807.04		0.00	
		Total:	2807.04	Total:	0.00
MISCELLANEOUS WASTES	141	131.74		147.86	
	151	3383.08		0.00	
	172	14.82		21.23	
	181	1209.76		1583.82	
	311	0.20		0.25	
	322	11.98		15.02	
	331	61.59		77.30	
	512	1127.59		1608.61	
	513	373.15		500.05	
	541	14.01		28.36	
	551	76.90		126.39	
	561	237.37		352.86	
	581	174.60		275.45	
	591	2006.75		2262.82	
	612	25.17		30.23	
		Total:	8848.71	Total:	7030.25

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
8	214	0.90		0.76	
		Total:	0.90	Total:	0.76
17	134	3.64		6.45	
	151	50.33		0.00	
	212	0.68		1.21	
	214	4.41		7.82	
	221	0.20		0.35	
	611	20.21		0.00	
		Total:	79.47	Total:	15.83
20	111	1.60		1.64	
	132	6.25		6.42	
	151	38.46		0.00	
	211	0.66		0.68	
	212	44.34		45.56	
	214	181.31		186.30	
	221	59.36		60.99	
	223	153.54		157.76	
	272	121.69		125.04	
	281	51.80		53.23	
	461	22.69		23.31	
	512	48.66		50.00	
	513	1.82		1.87	
	561	33.76		34.69	
		Total:	765.94	Total:	747.49
25	214	33.52		36.35	
	461	9.90		10.74	
		Total:	43.42	Total:	47.09
26	111	0.02		0.02	
	135	34.18		37.06	
	151	6.08		0.00	
	211	0.22		0.24	
	214	0.45		0.49	
	551	0.07		0.08	
		Total:	41.02	Total:	37.89
27	111	19.50		39.04	
	122	0.22		0.44	
	134	34.59		69.26	
	151	0.27		0.00	
	211	8.57		17.16	
	212	0.22		0.44	
	213	1.17		2.34	
	214	32.17		64.41	
	221	16.75		33.54	
	222	0.41		0.82	
	343	14.59		29.21	
	491	1.35		2.70	
	512	0.25		0.50	
	513	0.10		0.20	
		Total:	130.16	Total:	260.06
28	111	142.20		224.34	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	112	0.22		0.35	
	113	0.00		0.00	
	121	73.84		116.49	
	122	20.85		32.89	
	131	340.67		537.45	
	132	168.20		265.36	
	134	3.84		6.06	
	135	0.81		1.28	
	141	7.34		11.58	
	151	296.84		0.00	
	181	146.72		231.47	
	211	19.30		30.45	
	212	34.97		55.17	
	213	17.65		27.85	
	214	1240.30		1956.73	
	221	105.26		166.06	
	222	786.79		1241.26	
	223	87.67		138.31	
	241	115.43		182.11	
	261	42.02		66.29	
	271	1.75		2.76	
	272	5.03		7.94	
	281	16.96		26.76	
	291	275.46		434.57	
	331	12.42		19.59	
	341	0.22		0.35	
	342	53.10		83.77	
	343	51.29		80.92	
	352	318.09		501.83	
	461	1069.93		1687.95	
	491	66.30		104.60	
	512	114.29		180.31	
	513	179.69		283.48	
	551	26.02		41.05	
	561	197.42		311.46	
	581	174.59		275.44	
	591	8.08		12.75	
	611	546.01		0.00	
	741	1.14		1.80	
		Total:	6768.71	Total:	9348.83
29	122	3.35		4.98	
	133	22.76		33.84	
	134	4.40		6.54	
	211	9.03		13.43	
	214	0.22		0.33	
	221	13544.54		20140.62	
	222	9.98		14.84	
	223	25.27		37.58	
	241	309.56		460.31	
	343	28.30		42.08	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	491	0.22		0.33	
		Total:	13957.63	Total:	20754.88
30	141	1.17		1.52	
	213	2.29		2.97	
	214	114.49		148.36	
	221	80.11		103.81	
	223	0.41		0.53	
	232	0.15		0.19	
	241	0.11		0.14	
	331	0.45		0.58	
	342	0.22		0.29	
	343	11.66		15.11	
	352	1.20		1.56	
	461	3.37		4.37	
	491	2.28		2.95	
	521	1.15		1.49	
		Total:	219.06	Total:	283.87
32	111	0.29		0.36	
	112	55.87		68.40	
	121	0.31		0.38	
	123	0.05		0.06	
	135	8.34		10.21	
	151	619.36		0.00	
	172	0.07		0.09	
	181	14.62		17.90	
	211	0.85		1.04	
	213	4.79		5.86	
	214	5.73		7.01	
	221	92.07		112.71	
	222	29.06		35.58	
	223	4.60		5.63	
	241	15.85		19.40	
	261	242.20		296.50	
	272	0.10		0.12	
	341	1.14		1.40	
	351	0.68		0.83	
	461	0.41		0.50	
	512	102.92		126.00	
	571	34.54		42.28	
	611	261.21		0.00	
		Total:	1495.06	Total:	752.26
33	112	3.95		5.05	
	171	36.68		46.90	
	181	5.52		7.06	
	211	0.62		0.79	
	221	11.04		14.12	
	571	912.45		1166.74	
	591	308.35		394.28	
	611	107.01		0.00	
		Total:	1385.62	Total:	1634.94

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
34	111	4222.84		4650.95	
	112	245.42		270.30	
	121	24.90		27.42	
	123	139.39		153.52	
	131	80.05		88.17	
	132	146.70		161.57	
	133	14.17		15.61	
	171	85.43		94.09	
	181	65.76		72.43	
	211	2.44		2.69	
	212	16.10		17.73	
	214	797.88		878.77	
	221	38.92		42.87	
	222	54.77		60.32	
	223	4.21		4.64	
	251	0.68		0.75	
	261	17.18		18.92	
	272	52.70		58.04	
	291	1.83		2.02	
	321	1.35		1.49	
	331	16.05		17.68	
	342	1.18		1.30	
	352	715.20		787.71	
	451	12.20		13.44	
	461	72.71		80.08	
	491	248.34		273.52	
	551	0.22		0.24	
	591	1424.10		1568.48	
	611	125.56		0.00	
	711	1.25		1.38	
	731	2.23		2.46	
	741	2.05		2.26	
		Total:	8633.81	Total:	9370.85
35	111	81.78		222.04	
	112	0.29		0.79	
	121	25.31		68.72	
	122	0.22		0.60	
	123	0.16		0.43	
	131	14.59		39.61	
	132	65.23		177.10	
	151	4.42		0.00	
	171	5.50		14.93	
	181	4.40		11.95	
	211	15.07		40.92	
	212	1.07		2.91	
	213	4.37		11.86	
	214	7.73		20.99	
	221	13.29		36.08	
	223	15.13		41.08	
	281	0.10		0.27	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	341	0.74		2.01	
	352	0.24		0.65	
	451	2.45		6.65	
	461	1.72		4.67	
	512	1.70		4.62	
	513	0.64		1.74	
	551	0.74		2.01	
	Total:		266.89	Total:	712.63
36	111	503.08		1411.39	
	112	11.76		32.99	
	113	0.18		0.50	
	121	4.84		13.58	
	122	122.87		344.71	
	123	192.71		540.65	
	131	801.66		2249.06	
	132	183.65		515.23	
	171	200.40		562.22	
	172	1.90		5.33	
	181	9.31		26.12	
	211	13.06		36.64	
	212	5.67		15.91	
	213	20.36		57.12	
	214	72.68		203.90	
	221	10.01		28.08	
	222	0.45		1.26	
	241	14.31		40.15	
	252	87.30		244.92	
	272	0.56		1.57	
	343	0.22		0.62	
	352	20.53		57.60	
	421	39.02		109.47	
	451	3.62		10.16	
	461	10.52		29.51	
	512	3.02		8.47	
	513	3.45		9.68	
	541	2.23		6.26	
	551	2.96		8.30	
	711	3.12		8.75	
	725	0.08		0.22	
	Total:		2345.53	Total:	6580.37
37	111	1.12		1.38	
	121	2.10		2.59	
	122	8.90		10.99	
	132	6.25		7.72	
	133	35.02		43.23	
	134	902.52		1114.17	
	141	6.00		7.41	
	151	17.85		0.00	
	171	537.95		664.10	
	172	11.57		14.28	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	181	634.38		783.15	
	211	3.36		4.15	
	212	410.60		506.89	
	213	1.89		2.33	
	214	361.21		445.92	
	221	121.73		150.28	
	261	43.86		54.15	
	271	22.45		27.71	
	281	1.27		1.57	
	331	4.22		5.21	
	341	4.86		6.00	
	342	7.35		9.07	
	343	106.54		131.52	
	352	391.49		483.30	
	421	60.63		74.85	
	431	57.30		70.74	
	461	551.91		681.34	
	491	0.15		0.19	
	512	409.33		505.32	
	611	303.53		0.00	
		Total:	5027.34	Total:	5809.56
38	111	1.11		3.47	
	113	0.04		0.12	
	122	0.44		1.37	
	132	0.41		1.28	
	133	0.91		2.84	
	141	0.08		0.25	
	151	0.00		0.00	
	181	3.96		12.37	
	211	0.88		2.75	
	212	4.26		13.31	
	213	0.42		1.31	
	214	11.60		36.25	
	221	1.24		3.87	
	351	1.60		5.00	
	352	2.50		7.81	
	451	0.38		1.19	
	551	1.10		3.44	
		Total:	30.93	Total:	96.63
39	214	3.34		10.44	
	343	0.12		0.37	
	461	0.45		1.41	
		Total:	3.91	Total:	12.22
40	121	14.44		25.40	
	221	210.65		370.54	
	223	25.26		44.43	
	261	0.20		0.35	
		Total:	250.55	Total:	440.72
41	122	191.13		336.21	
	134	40.23		70.77	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	151	5.05		0.00	
	213	3.33		5.86	
	214	11.77		20.70	
	221	10.32		18.15	
	222	246.65		433.87	
	223	1.66		2.92	
	241	6.25		10.99	
	513	0.12		0.21	
	611	851.67		0.00	
		Total:	1368.18	Total:	899.68
42	111	0.22		0.32	
	112	0.36		0.52	
	122	2.47		3.54	
	123	0.89		1.28	
	131	33.39		47.92	
	135	0.90		1.29	
	141	1.67		2.40	
	151	320.62		0.00	
	181	0.88		1.26	
	211	255.71		366.95	
	212	2.25		3.23	
	213	1.34		1.92	
	214	59.32		85.13	
	221	0.22		0.32	
	222	21.01		30.15	
	241	63.53		91.17	
	291	0.22		0.32	
	331	1.40		2.01	
	341	1.36		1.95	
	352	2.02		2.90	
	461	1.36		1.95	
	513	0.68		0.98	
	541	0.22		0.32	
	551	2.21		3.17	
	611	28.70		0.00	
	711	26.72		38.34	
	741	51.77		74.29	
	791	0.35		0.50	
		Total:	881.79	Total:	764.13
44	222	56.28		99.00	
	261	0.02		0.04	
	612	2.30		4.05	
		Total:	58.60	Total:	103.09
45	111	2.29		4.03	
	113	0.05		0.09	
	122	3.21		5.65	
	132	0.22		0.39	
	211	2.65		4.66	
	212	0.73		1.28	
	214	10.82		19.03	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	221	5.62		9.89	
	223	8.02		14.11	
	272	0.67		1.18	
	331	1.30		2.29	
	343	2.06		3.62	
	Total:		37.64	Total:	66.22
48	111	18.19		38.36	
	123	0.12		0.25	
	211	0.22		0.46	
	212	0.45		0.95	
	213	7.50		15.82	
	221	20.01		42.20	
	222	14.37		30.30	
	241	37.63		79.35	
	352	0.35		0.74	
	451	0.18		0.38	
	461	2.29		4.83	
	Total:		101.31	Total:	213.64
49	111	1.22		1.51	
	112	1.34		1.66	
	113	0.12		0.15	
	121	0.60		0.74	
	132	21.01		26.08	
	135	151.27		187.76	
	151	18.56		0.00	
	172	0.75		0.93	
	181	2.18		2.71	
	211	0.85		1.06	
	213	2.52		3.13	
	214	2.04		2.53	
	221	197.23		244.81	
	222	2.68		3.33	
	223	12.61		15.65	
	232	0.10		0.12	
	241	2.08		2.58	
	261	2997.91		3721.17	
	272	0.08		0.10	
	331	0.70		0.87	
	343	1.78		2.21	
	352	9.64		11.97	
	461	9.13		11.33	
	512	1.18		1.46	
	513	10.15		12.60	
	541	0.07		0.09	
	551	0.90		1.12	
	561	0.15		0.19	
	611	107.98		0.00	
	612	0.82		1.02	
	725	0.03		0.04	
	731	197.19		244.76	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	3754.87	Total:	4503.68
50	112	0.02		0.03	
	113	0.15		0.24	
	121	0.60		0.96	
	181	0.77		1.23	
	211	119.11		190.87	
	212	27.72		44.42	
	214	8.06		12.92	
	221	1.83		2.93	
	261	1847.71		2960.83	
	343	17.51		28.06	
	352	0.86		1.38	
	451	1.32		2.12	
	512	47.12		75.51	
	731	4.66		7.47	
		Total:	2077.44	Total:	3328.97
51	111	0.90		1.44	
	121	9.19		14.73	
	123	7.23		11.59	
	131	0.45		0.72	
	133	7.33		11.75	
	171	0.84		1.35	
	181	0.84		1.35	
	211	2.24		3.59	
	212	16.15		25.88	
	213	2.46		3.94	
	214	32.52		52.11	
	221	2.09		3.35	
	222	8.12		13.01	
	343	7.09		11.36	
	411	13.48		21.60	
	451	5.86		9.39	
	461	0.25		0.40	
	512	29.37		47.06	
	541	0.22		0.35	
	611	16.85		0.00	
		Total:	163.48	Total:	234.97
52	214	1.57		2.26	
	222	14.59		20.99	
	232	1.92		2.76	
	352	0.50		0.72	
	551	0.45		0.65	
		Total:	19.03	Total:	27.38
55	214	28.78		41.41	
	221	3.75		5.40	
	222	0.12		0.17	
	342	3.38		4.86	
	512	41.70		60.01	
	521	2.52		3.63	
		Total:	80.25	Total:	115.48

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
56	211	0.66		0.95	
		Total:	0.66	Total:	0.95
61	113	0.22		0.37	
	123	0.22		0.37	
	541	0.44		0.75	
		Total:	0.88	Total:	1.49
65	261	37.07		60.65	
		Total:	37.07	Total:	60.65
72	171	669.06		763.99	
	181	89.80		102.54	
	211	23.87		27.26	
	222	22.76		25.99	
	491	22.76		25.99	
		Total:	828.25	Total:	945.77
73	111	215.13		505.54	
	112	0.54		1.27	
	113	1.04		2.44	
	121	666.80		1566.93	
	122	21.94		51.56	
	123	0.22		0.52	
	132	30.57		71.84	
	133	0.36		0.85	
	134	76.68		180.19	
	141	0.04		0.09	
	151	330.33		0.00	
	172	0.02		0.05	
	181	56.60		133.01	
	211	252.20		592.65	
	212	76.26		179.21	
	213	2231.63		5244.16	
	214	191.68		450.43	
	221	250.51		588.68	
	222	12.50		29.37	
	223	3.00		7.05	
	252	0.50		1.17	
	261	198.29		465.97	
	271	4.12		9.68	
	272	17.24		40.51	
	322	0.30		0.70	
	331	1.73		4.07	
	341	0.46		1.08	
	343	49.36		115.99	
	352	80.21		188.49	
	491	2.12		4.98	
	512	139.46		327.72	
	541	7.07		16.61	
	551	12.77		30.01	
	611	299.16		0.00	
		Total:	5230.84	Total:	10812.82
75	123	0.02		0.02	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	132	1.04		1.19	
	135	0.83		0.95	
	181	0.25		0.29	
	211	0.44		0.50	
	212	0.22		0.25	
	214	112.91		128.93	
	241	90.04		102.81	
	352	0.75		0.86	
	461	1.70		1.94	
		Total:	208.20	Total:	237.74
76	171	0.22		0.25	
	214	1.56		1.78	
	221	0.45		0.51	
		Total:	2.23	Total:	2.54
79	151	0.42		0.00	
		Total:	0.42	Total:	0.00
80	141	0.22		0.27	
	151	107.38		0.00	
	211	3.98		4.88	
	212	0.58		0.71	
	214	0.80		0.98	
	221	0.89		1.09	
	223	0.18		0.22	
	241	1.25		1.53	
	261	2.53		3.10	
	291	0.04		0.05	
	311	0.20		0.25	
	322	11.68		14.32	
	331	0.72		0.88	
	343	0.45		0.55	
	352	0.10		0.12	
	512	0.05		0.06	
	551	0.81		0.99	
	611	0.35		0.00	
	612	9.26		11.36	
	741	0.74		0.91	
		Total:	142.21	Total:	42.27
82	111	0.22		0.31	
	122	0.67		0.94	
	134	0.62		0.87	
	151	491.35		0.00	
	181	1.68		2.36	
	213	14.59		20.49	
	214	1.65		2.32	
	221	42.77		60.08	
	222	7.50		10.53	
	241	41.25		57.94	
	261	37.89		53.22	
	343	0.15		0.21	
	461	5.81		8.16	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	512	55.61		78.11	
	551	16.31		22.91	
	581	0.01		0.01	
	611	2.94		0.00	
	725	0.38		0.53	
	Total:		721.40	Total:	318.99
84	151	2.94		0.00	
	Total:		2.94	Total:	0.00
91	211	0.45		0.49	
	213	4.17		4.50	
	214	1.52		1.64	
	221	31.94		34.47	
	222	3.33		3.59	
	232	0.14		0.15	
	241	5.83		6.29	
	331	0.90		0.97	
	512	0.21		0.23	
	513	1.20		1.30	
	551	0.32		0.35	
	611	3.60		0.00	
	612	12.66		13.66	
	Total:		66.27	Total:	67.64
92	135	0.20		0.22	
	151	2.52		0.00	
	221	1.99		2.15	
	321	0.45		0.49	
	611	5.89		0.00	
	Total:		11.05	Total:	2.86
94	122	2.91		3.14	
	151	27.80		0.00	
	214	0.10		0.11	
	222	1.56		1.68	
	352	0.63		0.68	
	551	0.44		0.47	
	Total:		33.44	Total:	6.08
95	141	0.30		0.32	
	151	470.98		0.00	
	221	1.75		1.89	
	331	0.30		0.32	
	341	0.66		0.71	
	343	0.10		0.11	
	Total:		474.09	Total:	3.35
96	112	0.62		0.67	
	133	20.85		22.50	
	141	0.20		0.22	
	151	262.86		0.00	
	221	9.62		10.38	
	222	37.62		40.60	
	223	32.34		34.90	
	241	22.91		24.72	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	261	1.73		1.87	
	343	2.46		2.65	
	461	14.97		16.16	
	512	1.73		1.87	
	551	0.05		0.05	
	731	1.09		1.18	
		Total:	409.05	Total:	157.77
97	111	3.74		4.04	
	112	7.15		7.72	
	113	18.92		20.42	
	121	24.38		26.31	
	122	186.73		201.52	
	123	52.29		56.43	
	131	0.21		0.23	
	132	101.97		110.05	
	134	79.62		85.93	
	135	4.59		4.95	
	141	114.68		123.76	
	151	250.94		0.00	
	171	0.50		0.54	
	172	0.51		0.55	
	181	57.22		61.75	
	211	26.72		28.84	
	212	5.12		5.53	
	213	30.67		33.10	
	214	74.16		80.03	
	221	410.32		442.83	
	222	29.91		32.28	
	223	209.46		226.05	
	232	0.20		0.22	
	241	17.78		19.19	
	261	276.01		297.88	
	272	1.39		1.50	
	281	1.82		1.96	
	291	82.46		88.99	
	331	18.07		19.50	
	341	2.00		2.16	
	342	0.41		0.44	
	343	48.54		52.39	
	352	150.72		162.66	
	421	477.37		515.19	
	461	151.45		163.45	
	512	130.89		141.26	
	513	160.13		172.82	
	521	0.09		0.10	
	541	2.80		3.02	
	551	0.23		0.25	
	561	6.04		6.52	
	591	266.22		287.31	
	612	0.13		0.14	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	725	0.19		0.21	
	731	10.23		11.04	
	Total:		3494.98	Total:	3501.06
99	111	12.39		12.39	
	112	9.34		9.34	
	113	8.82		8.82	
	121	127.73		127.73	
	122	21.10		21.10	
	123	22.01		22.01	
	131	3.54		3.54	
	133	0.35		0.35	
	135	4.17		4.17	
	141	0.04		0.04	
	151	57.72		0.00	
	181	114.87		114.87	
	211	186.28		186.28	
	212	4.15		4.15	
	213	83.69		83.69	
	214	63.92		63.92	
	221	411.73		411.73	
	222	11.87		11.87	
	223	41.97		41.97	
	241	20.73		20.73	
	261	8.33		8.33	
	281	2.47		2.47	
	291	33.21		33.21	
	331	3.33		3.33	
	343	0.45		0.45	
	352	17.59		17.59	
	431	9.59		9.59	
	451	0.68		0.68	
	461	84.46		84.46	
	512	0.10		0.10	
	513	15.17		15.17	
	541	0.96		0.96	
	551	11.30		11.30	
	611	126.37		0.00	
	711	6.25		6.25	
	731	3.10		3.10	
	Total:		1529.78	Total:	1345.69

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	111	12.39		12.39	
	112	9.34		9.34	
	113	8.82		8.82	
	121	127.73		127.73	
	122	21.10		21.10	
	123	22.01		22.01	
	131	3.54		3.54	
	133	0.35		0.35	
	135	4.17		4.17	
	141	0.04		0.04	
	151	57.72		0.00	
	181	114.87		114.87	
	211	186.28		186.28	
	212	4.15		4.15	
	213	83.69		83.69	
	214	63.92		63.92	
	221	411.73		411.73	
	222	11.87		11.87	
	223	41.97		41.97	
	241	20.73		20.73	
	261	8.33		8.33	
	281	2.47		2.47	
	291	33.21		33.21	
	331	3.33		3.33	
	343	0.45		0.45	
	352	17.59		17.59	
	431	9.59		9.59	
	451	0.68		0.68	
	461	84.46		84.46	
	512	0.10		0.10	
	513	15.17		15.17	
	541	0.96		0.96	
	551	11.30		11.30	
	611	126.37		0.00	
	711	6.25		6.25	
	731	3.10		3.10	
		Total:	1529.78	Total:	1345.69
Agriculture and Mining	214	0.90		0.76	
		Total:	0.90	Total:	0.76
Construction	134	3.64		6.45	
	151	50.33		0.00	
	212	0.68		1.21	
	214	4.41		7.82	
	221	0.20		0.35	
	611	20.21		0.00	
		Total:	79.47	Total:	15.83
Manufacturing	111	4973.54		6554.63	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	112	317.51		377.88	
	113	0.22		0.62	
	121	131.30		229.18	
	122	156.85		395.98	
	123	332.31		694.66	
	131	1236.97		2914.29	
	132	576.69		1134.68	
	133	72.86		95.52	
	134	945.35		1196.03	
	135	43.33		48.55	
	141	14.59		20.76	
	151	983.28		0.00	
	171	865.96		1382.24	
	172	13.54		19.70	
	181	884.67		1162.45	
	211	74.06		150.94	
	212	517.23		657.92	
	213	52.94		111.64	
	214	2862.63		3996.25	
	221	14094.32		20893.03	
	222	881.46		1354.08	
	223	290.83		385.53	
	232	0.15		0.19	
	241	455.26		702.11	
	251	0.68		0.75	
	252	87.30		244.92	
	261	345.26		435.86	
	271	24.20		30.47	
	272	180.08		192.71	
	281	70.13		81.83	
	291	277.29		436.59	
	321	1.35		1.49	
	331	33.14		43.06	
	341	6.96		9.76	
	342	61.85		94.43	
	343	212.72		299.83	
	351	2.28		5.83	
	352	1449.25		1840.46	
	421	99.65		184.32	
	431	57.30		70.74	
	451	18.65		31.44	
	461	1743.61		2523.88	
	491	318.64		384.29	
	512	680.17		875.22	
	513	185.70		296.97	
	521	1.15		1.49	
	541	2.23		6.26	
	551	31.11		55.12	
	561	231.18		346.15	
	571	946.99		1209.02	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	581	174.59		275.44	
	591	1740.53		1975.51	
	611	1343.32		0.00	
	711	4.37		10.13	
	725	0.08		0.22	
	731	2.23		2.46	
	741	3.19		4.06	
		Total:	41115.03	Total:	56449.57
Transportation, Communication, Utilities	111	21.92		44.22	
	112	1.70		2.18	
	113	0.17		0.24	
	121	15.04		26.14	
	122	196.81		345.40	
	123	1.01		1.53	
	131	33.39		47.92	
	132	21.23		26.47	
	134	40.23		70.77	
	135	152.17		189.05	
	141	1.67		2.40	
	151	344.23		0.00	
	172	0.75		0.93	
	181	3.06		3.97	
	211	259.43		373.13	
	212	3.43		5.46	
	213	14.69		26.73	
	214	83.95		127.39	
	221	444.05		685.91	
	222	340.99		596.65	
	223	47.55		77.11	
	232	0.10		0.12	
	241	109.49		184.09	
	261	2998.13		3721.56	
	272	0.75		1.28	
	291	0.22		0.32	
	331	3.40		5.17	
	341	1.36		1.95	
	343	3.84		5.83	
	352	12.01		15.61	
	451	0.18		0.38	
	461	12.78		18.11	
	512	1.18		1.46	
	513	10.95		13.79	
	541	0.29		0.41	
	551	3.11		4.29	
	561	0.15		0.19	
	611	988.35		0.00	
	612	3.12		5.07	
	711	26.72		38.34	
	725	0.03		0.04	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	731	197.19		244.76	
	741	51.77		74.29	
	791	0.35		0.50	
		Total:	6452.94	Total:	6991.16
Wholesale Trade	111	0.90		1.44	
	112	0.02		0.03	
	113	0.15		0.24	
	121	9.79		15.69	
	123	7.23		11.59	
	131	0.45		0.72	
	133	7.33		11.75	
	171	0.84		1.35	
	181	1.61		2.58	
	211	121.35		194.46	
	212	43.87		70.30	
	213	2.46		3.94	
	214	40.58		65.03	
	221	3.92		6.28	
	222	8.12		13.01	
	261	1847.71		2960.83	
	343	24.60		39.42	
	352	0.86		1.38	
	411	13.48		21.60	
	451	7.18		11.51	
	461	0.25		0.40	
	512	76.49		122.57	
	541	0.22		0.35	
	611	16.85		0.00	
	731	4.66		7.47	
		Total:	2240.92	Total:	3563.94
Retail Trade	211	0.66		0.95	
	214	30.35		43.67	
	221	3.75		5.40	
	222	14.71		21.16	
	232	1.92		2.76	
	342	3.38		4.86	
	352	0.50		0.72	
	512	41.70		60.01	
	521	2.52		3.63	
	551	0.45		0.65	
		Total:	99.94	Total:	143.81
Finance, Insurance & Real Estate	113	0.22		0.37	
	123	0.22		0.37	
	261	37.07		60.65	
	541	0.44		0.75	
		Total:	37.95	Total:	62.14

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Services	111	215.35		505.85	
	112	0.54		1.27	
	113	1.04		2.44	
	121	666.80		1566.93	
	122	22.61		52.50	
	123	0.24		0.54	
	132	31.61		73.03	
	133	0.36		0.85	
	134	77.30		181.06	
	135	0.83		0.95	
	141	0.26		0.36	
	151	929.60		0.00	
	171	669.28		764.24	
	172	0.02		0.05	
	181	148.33		238.20	
	211	280.49		625.29	
	212	77.06		180.17	
	213	2246.22		5264.65	
	214	308.60		584.44	
	221	294.62		650.36	
	222	42.76		65.89	
	223	3.18		7.27	
	241	132.54		162.28	
	252	0.50		1.17	
	261	238.71		522.29	
	271	4.12		9.68	
	272	17.24		40.51	
	291	0.04		0.05	
	311	0.20		0.25	
	322	11.98		15.02	
	331	2.45		4.95	
	341	0.46		1.08	
	343	49.96		116.75	
	352	81.06		189.47	
	461	7.51		10.10	
	491	24.88		30.97	
	512	195.12		405.89	
	541	7.07		16.61	
	551	29.89		53.91	
	581	0.01		0.01	
	611	302.45		0.00	
	612	9.26		11.36	
	725	0.38		0.53	
	741	0.74		0.91	
		Total:	7133.67	Total:	12360.13
Government	111	3.74		4.04	
	112	7.77		8.39	
	113	18.92		20.42	
	121	24.38		26.31	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	122	189.64		204.66	
	123	52.29		56.43	
	131	0.21		0.23	
	132	101.97		110.05	
	133	20.85		22.50	
	134	79.62		85.93	
	135	4.79		5.17	
	141	115.18		124.30	
	151	1017.92		0.00	
	171	0.50		0.54	
	172	0.51		0.55	
	181	57.22		61.75	
	211	27.17		29.33	
	212	5.12		5.53	
	213	34.84		37.60	
	214	75.78		81.78	
	221	455.62		491.72	
	222	72.42		78.15	
	223	241.80		260.95	
	232	0.34		0.37	
	241	46.52		50.20	
	261	277.74		299.75	
	272	1.39		1.50	
	281	1.82		1.96	
	291	82.46		88.99	
	321	0.45		0.49	
	331	19.27		20.79	
	341	2.66		2.87	
	342	0.41		0.44	
	343	51.10		55.15	
	352	151.35		163.34	
	421	477.37		515.19	
	461	166.42		179.61	
	512	132.83		143.36	
	513	161.33		174.12	
	521	0.09		0.10	
	541	2.80		3.02	
	551	1.04		1.12	
	561	6.04		6.52	
	591	266.22		287.31	
	611	9.49		0.00	
	612	12.79		13.80	
	725	0.19		0.21	
	731	11.32		12.22	
		Total:	4491.70	Total:	3738.76

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
8	NON-HALOGENATED SOLVENTS	0.90		0.76	
	Total:		0.90	Total:	0.76
17	WASTE OIL	0.20		0.35	
	NON-HALOGENATED SOLVENTS	5.09		9.03	
	ORGANIC LIQUIDS	3.64		6.45	
	SOIL	20.21		0.00	
	MISCELLANEOUS WASTES	50.33		0.00	
	Total:		79.47	Total:	15.83
20	WASTE OIL	212.90		218.75	
	HALOGENATED SOLVENTS	0.66		0.68	
	NON-HALOGENATED SOLVENTS	225.65		231.86	
	DYE & PAINT SLUDGES AND RESINS	196.18		201.58	
	METAL-CONTAINING LIQUIDS	7.85		8.06	
	MISCELLANEOUS WASTES	122.70		0.00	
	Total:		765.94	Total:	660.93
25	NON-HALOGENATED SOLVENTS	33.52		36.35	
	DYE & PAINT SLUDGES AND RESINS	9.90		10.74	
	Total:		43.42	Total:	47.09
26	HALOGENATED SOLVENTS	0.22		0.24	
	NON-HALOGENATED SOLVENTS	0.45		0.49	
	METAL-CONTAINING LIQUIDS	0.02		0.02	
	NON-METALLIC INORGANIC LIQUIDS	34.18		37.06	
	MISCELLANEOUS WASTES	6.15		0.00	
	Total:		41.02	Total:	37.81
27	WASTE OIL	16.75		33.54	
	HALOGENATED SOLVENTS	8.57		17.16	
	NON-HALOGENATED SOLVENTS	33.56		67.19	
	ORGANIC LIQUIDS	49.18		98.47	
	OILY SLUDGES	0.41		0.82	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.35		2.70	
	METAL-CONTAINING LIQUIDS	19.50		39.04	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.44	
	MISCELLANEOUS WASTES	0.62		0.00	
	Total:		130.16	Total:	259.36
28	WASTE OIL	192.93		304.37	
	HALOGENATED SOLVENTS	20.44		32.25	
	NON-HALOGENATED SOLVENTS	1292.92		2039.75	
	ORGANIC LIQUIDS	108.45		171.10	
	DIOXINS	42.02		66.29	
	OILY SLUDGES	1104.88		1743.09	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	181.73		286.71	
	DYE & PAINT SLUDGES AND RESINS	1369.13		2159.98	
	METAL-CONTAINING LIQUIDS	384.24		606.19	
	NON-METALLIC INORGANIC LIQUIDS	362.55		571.97	
	SOIL	546.01		0.00	
	MISCELLANEOUS WASTES	1163.41		1835.43	
	Total:		6768.71	Total:	9817.13
29	WASTE OIL	13569.81		20178.20	
	HALOGENATED SOLVENTS	9.03		13.43	
	NON-HALOGENATED SOLVENTS	0.22		0.33	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	ORGANIC LIQUIDS	55.46		82.46	
	OILY SLUDGES	9.98		14.84	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	309.78		460.64	
	NON-METALLIC INORGANIC LIQUIDS	3.35		4.98	
	Total:		13957.63		20754.88
30	WASTE OIL	80.52		104.34	
	NON-HALOGENATED SOLVENTS	116.78		151.33	
	ORGANIC LIQUIDS	11.88		15.40	
	PESTICIDES	0.15		0.19	
	OILY SLUDGES	1.20		1.56	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.39		3.09	
	DYE & PAINT SLUDGES AND RESINS	3.37		4.37	
	NON-METALLIC INORGANIC SLUDGES	1.15		1.49	
	MISCELLANEOUS WASTES	1.62		2.10	
	Total:		219.06		283.87
32	WASTE OIL	96.67		118.34	
	HALOGENATED SOLVENTS	0.85		1.04	
	NON-HALOGENATED SOLVENTS	10.52		12.87	
	ORGANIC LIQUIDS	1.14		1.40	
	DIOXINS	242.20		296.50	
	OILY SLUDGES	29.06		35.58	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.68		0.83	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	50.39		61.68	
	DYE & PAINT SLUDGES AND RESINS	0.51		0.62	
	METAL-CONTAINING LIQUIDS	0.60		0.74	
	NON-METALLIC INORGANIC LIQUIDS	64.26		78.67	
	SOIL	261.21		0.00	
	MISCELLANEOUS WASTES	736.97		0.00	
	Total:		1495.06		608.27
33	WASTE OIL	11.04		14.12	
	HALOGENATED SOLVENTS	0.62		0.79	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	912.45		1166.74	
	METAL-CONTAINING SLUDGES	36.68		46.90	
	NON-METALLIC INORGANIC LIQUIDS	3.95		5.05	
	SOIL	107.01		0.00	
	MISCELLANEOUS WASTES	313.87		401.34	
	Total:		1385.62		1634.94
34	WASTE OIL	43.13		47.51	
	HALOGENATED SOLVENTS	4.49		4.95	
	NON-HALOGENATED SOLVENTS	813.98		896.50	
	ORGANIC LIQUIDS	15.35		16.91	
	DIOXINS	19.41		21.38	
	OILY SLUDGES	769.97		848.03	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	12.88		14.19	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	249.69		275.01	
	DYE & PAINT SLUDGES AND RESINS	127.24		140.14	
	METAL-CONTAINING SLUDGES	85.43		94.09	
	METAL-CONTAINING LIQUIDS	4394.44		4839.94	
	CYANIDE & METAL LIQUIDS	1.25		1.38	
	NON-METALLIC INORGANIC LIQUIDS	464.86		511.99	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	SOIL	125.56		0.00	
	MISCELLANEOUS WASTES	1506.13		1658.83	
	Total:		8633.81	Total:	9370.85
35	WASTE OIL	28.42		77.16	
	HALOGENATED SOLVENTS	15.07		40.92	
	NON-HALOGENATED SOLVENTS	13.17		35.76	
	ORGANIC LIQUIDS	0.74		2.01	
	OILY SLUDGES	0.24		0.65	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	2.45		6.65	
	DYE & PAINT SLUDGES AND RESINS	1.82		4.94	
	METAL-CONTAINING SLUDGES	5.50		14.93	
	METAL-CONTAINING LIQUIDS	172.32		467.86	
	NON-METALLIC INORGANIC LIQUIDS	15.26		41.43	
	MISCELLANEOUS WASTES	11.90		0.00	
	Total:		266.89	Total:	692.31
36	WASTE OIL	10.01		28.08	
	HALOGENATED SOLVENTS	13.06		36.64	
	NON-HALOGENATED SOLVENTS	98.71		276.93	
	ORGANIC LIQUIDS	0.22		0.62	
	OILY SLUDGES	20.98		58.86	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	3.62		10.16	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	101.61		285.07	
	DYE & PAINT SLUDGES AND RESINS	11.08		31.08	
	METAL-CONTAINING SLUDGES	200.40		562.22	
	METAL-CONTAINING LIQUIDS	691.65		1940.42	
	CYANIDE & METAL LIQUIDS	3.12		8.75	
	NON-METALLIC INORGANIC LIQUIDS	1129.18		3167.91	
	NON-METALLIC INORGANIC SLUDGES	39.02		109.47	
	MISCELLANEOUS WASTES	22.87		64.16	
	Total:		2345.53	Total:	6580.37
37	WASTE OIL	121.73		150.28	
	HALOGENATED SOLVENTS	3.36		4.15	
	NON-HALOGENATED SOLVENTS	773.70		955.14	
	ORGANIC LIQUIDS	1056.29		1303.99	
	DIOXINS	43.86		54.15	
	OILY SLUDGES	391.49		483.30	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.15		0.19	
	DYE & PAINT SLUDGES AND RESINS	575.63		710.62	
	METAL-CONTAINING SLUDGES	537.95		664.10	
	METAL-CONTAINING LIQUIDS	9.47		11.69	
	NON-METALLIC INORGANIC LIQUIDS	8.90		10.99	
	NON-METALLIC INORGANIC SLUDGES	117.93		145.59	
	SOIL	303.53		0.00	
	MISCELLANEOUS WASTES	1083.35		1337.41	
	Total:		5027.34	Total:	5831.60
38	WASTE OIL	1.24		3.87	
	HALOGENATED SOLVENTS	0.88		2.75	
	NON-HALOGENATED SOLVENTS	16.28		50.87	
	ORGANIC LIQUIDS	0.91		2.84	
	OILY SLUDGES	2.50		7.81	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	HALOGENATED ORGANIC SLUDGES & SOLIDS	1.98		6.19	
	METAL-CONTAINING LIQUIDS	1.52		4.75	
	NON-METALLIC INORGANIC LIQUIDS	0.48		1.49	
	MISCELLANEOUS WASTES	5.14		16.06	
	Total:		30.93	Total:	96.63
39	NON-HALOGENATED SOLVENTS	3.34		10.44	
	ORGANIC LIQUIDS	0.12		0.37	
	DYE & PAINT SLUDGES AND RESINS	0.45		1.41	
	Total:		3.91	Total:	12.22
40	WASTE OIL	235.91		414.97	
	DIOXINS	0.20		0.35	
	METAL-CONTAINING LIQUIDS	14.44		25.40	
	Total:		250.55	Total:	440.72
41	WASTE OIL	11.98		21.07	
	NON-HALOGENATED SOLVENTS	15.10		26.56	
	ORGANIC LIQUIDS	40.23		70.77	
	OILY SLUDGES	246.65		433.87	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	6.25		10.99	
	NON-METALLIC INORGANIC LIQUIDS	191.13		336.21	
	SOIL	851.67		0.00	
	MISCELLANEOUS WASTES	5.17		0.00	
	Total:		1368.18	Total:	899.47
42	WASTE OIL	0.22		0.32	
	HALOGENATED SOLVENTS	307.48		441.24	
	NON-HALOGENATED SOLVENTS	62.91		90.28	
	ORGANIC LIQUIDS	1.36		1.95	
	OILY SLUDGES	23.03		33.05	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	63.53		91.17	
	DYE & PAINT SLUDGES AND RESINS	1.58		2.27	
	METAL-CONTAINING LIQUIDS	0.22		0.32	
	CYANIDE & METAL LIQUIDS	26.72		38.34	
	NON-METALLIC INORGANIC LIQUIDS	38.36		55.05	
	SOIL	28.70		0.00	
	MISCELLANEOUS WASTES	327.68		470.24	
	Total:		881.79	Total:	1224.23
44	DIOXINS	0.02		0.04	
	OILY SLUDGES	56.28		99.00	
	MISCELLANEOUS WASTES	2.30		4.05	
	Total:		58.60	Total:	103.09
45	WASTE OIL	13.64		24.00	
	HALOGENATED SOLVENTS	2.65		4.66	
	NON-HALOGENATED SOLVENTS	11.55		20.31	
	ORGANIC LIQUIDS	2.06		3.62	
	DYE & PAINT SLUDGES AND RESINS	0.67		1.18	
	METAL-CONTAINING LIQUIDS	2.51		4.42	
	NON-METALLIC INORGANIC LIQUIDS	3.26		5.74	
	MISCELLANEOUS WASTES	1.30		2.29	
	Total:		37.64	Total:	66.22
48	WASTE OIL	20.01		42.20	
	HALOGENATED SOLVENTS	0.22		0.46	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-HALOGENATED SOLVENTS	7.95		16.77	
	OILY SLUDGES	14.72		31.04	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.18		0.38	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	37.63		79.35	
	DYE & PAINT SLUDGES AND RESINS	2.29		4.83	
	METAL-CONTAINING LIQUIDS	18.19		38.36	
	NON-METALLIC INORGANIC LIQUIDS	0.12		0.25	
	Total:		101.31	Total:	213.64
49	WASTE OIL	209.84		260.46	
	HALOGENATED SOLVENTS	0.85		1.06	
	NON-HALOGENATED SOLVENTS	4.56		5.66	
	ORGANIC LIQUIDS	1.78		2.21	
	PESTICIDES	0.10		0.12	
	DIOXINS	3195.10		3965.93	
	OILY SLUDGES	12.32		15.30	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.08		2.58	
	DYE & PAINT SLUDGES AND RESINS	9.21		11.43	
	METAL-CONTAINING LIQUIDS	22.86		28.37	
	NON-METALLIC INORGANIC LIQUIDS	152.73		189.57	
	SOIL	107.98		0.00	
	MISCELLANEOUS WASTES	35.46		0.00	
	Total:		3754.87	Total:	4482.69
50	WASTE OIL	1.83		2.93	
	HALOGENATED SOLVENTS	119.11		190.87	
	NON-HALOGENATED SOLVENTS	35.78		57.34	
	ORGANIC LIQUIDS	17.51		28.06	
	DIOXINS	1852.37		2968.30	
	OILY SLUDGES	0.86		1.38	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	1.32		2.12	
	METAL-CONTAINING LIQUIDS	0.60		0.96	
	NON-METALLIC INORGANIC LIQUIDS	0.17		0.27	
	MISCELLANEOUS WASTES	47.89		76.74	
	Total:		2077.44	Total:	3328.97
51	WASTE OIL	2.09		3.35	
	HALOGENATED SOLVENTS	2.24		3.59	
	NON-HALOGENATED SOLVENTS	51.13		81.93	
	ORGANIC LIQUIDS	14.42		23.11	
	OILY SLUDGES	8.12		13.01	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	5.86		9.39	
	DYE & PAINT SLUDGES AND RESINS	0.25		0.40	
	METAL-CONTAINING SLUDGES	0.84		1.35	
	METAL-CONTAINING LIQUIDS	10.09		16.17	
	NON-METALLIC INORGANIC LIQUIDS	7.68		12.31	
	NON-METALLIC INORGANIC SLUDGES	13.48		21.60	
	SOIL	16.85		0.00	
	MISCELLANEOUS WASTES	30.43		48.76	
	Total:		163.48	Total:	234.97
52	NON-HALOGENATED SOLVENTS	1.57		2.26	
	PESTICIDES	1.92		2.76	
	OILY SLUDGES	15.09		21.71	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	MISCELLANEOUS WASTES	0.45		0.65	
	Total:		19.03	Total:	27.38
55	WASTE OIL	3.75		5.40	
	NON-HALOGENATED SOLVENTS	28.78		41.41	
	ORGANIC LIQUIDS	3.38		4.86	
	OILY SLUDGES	0.12		0.17	
	NON-METALLIC INORGANIC SLUDGES	2.52		3.63	
	MISCELLANEOUS WASTES	41.70		60.01	
	Total:		80.25	Total:	115.48
56	HALOGENATED SOLVENTS	0.66		0.95	
	Total:		0.66	Total:	0.95
61	NON-METALLIC INORGANIC LIQUIDS	0.44		0.74	
	MISCELLANEOUS WASTES	0.44		0.75	
	Total:		0.88	Total:	1.49
65	DIOXINS	37.07		60.65	
	Total:		37.07	Total:	60.65
72	HALOGENATED SOLVENTS	23.87		27.26	
	OILY SLUDGES	22.76		25.99	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	22.76		25.99	
	METAL-CONTAINING SLUDGES	669.06		763.99	
	MISCELLANEOUS WASTES	89.80		102.54	
	Total:		828.25	Total:	945.77
73	WASTE OIL	253.51		595.73	
	HALOGENATED SOLVENTS	252.20		592.65	
	NON-HALOGENATED SOLVENTS	2499.57		5873.80	
	ORGANIC LIQUIDS	126.86		298.11	
	DIOXINS	198.29		465.97	
	OILY SLUDGES	92.71		217.86	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.62		6.15	
	DYE & PAINT SLUDGES AND RESINS	21.36		50.19	
	METAL-CONTAINING LIQUIDS	912.50		2144.31	
	NON-METALLIC INORGANIC LIQUIDS	23.74		55.79	
	SOIL	299.16		0.00	
	MISCELLANEOUS WASTES	548.32		1288.51	
	Total:		5230.84	Total:	11589.07
75	HALOGENATED SOLVENTS	0.44		0.50	
	NON-HALOGENATED SOLVENTS	113.13		129.18	
	OILY SLUDGES	0.75		0.86	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	90.04		102.81	
	DYE & PAINT SLUDGES AND RESINS	1.70		1.94	
	METAL-CONTAINING LIQUIDS	1.04		1.19	
	NON-METALLIC INORGANIC LIQUIDS	0.85		0.97	
	MISCELLANEOUS WASTES	0.25		0.29	
	Total:		208.20	Total:	237.74
76	WASTE OIL	0.45		0.51	
	NON-HALOGENATED SOLVENTS	1.56		1.78	
	METAL-CONTAINING SLUDGES	0.22		0.25	
	Total:		2.23	Total:	2.54
79	MISCELLANEOUS WASTES	0.42		0.00	
	Total:		0.42	Total:	0.00

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
80	WASTE OIL	1.07		1.31	
	HALOGENATED SOLVENTS	4.72		5.79	
	NON-HALOGENATED SOLVENTS	1.38		1.69	
	ORGANIC LIQUIDS	0.45		0.55	
	DIOXINS	2.53		3.10	
	OILY SLUDGES	0.10		0.12	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.25		1.53	
	DYE & PAINT SLUDGES AND RESINS	0.04		0.05	
	SOIL	0.35		0.00	
	MISCELLANEOUS WASTES	130.32		159.82	
	Total:		142.21	Total:	173.96
82	WASTE OIL	42.77		60.08	
	NON-HALOGENATED SOLVENTS	16.24		22.81	
	ORGANIC LIQUIDS	0.77		1.08	
	DIOXINS	37.89		53.22	
	OILY SLUDGES	7.50		10.53	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	41.25		57.94	
	DYE & PAINT SLUDGES AND RESINS	5.81		8.16	
	METAL-CONTAINING LIQUIDS	0.60		0.84	
	NON-METALLIC INORGANIC LIQUIDS	0.67		0.94	
	SOIL	2.94		0.00	
	MISCELLANEOUS WASTES	565.08		0.00	
	Total:		721.52	Total:	215.60
91	WASTE OIL	31.94		34.47	
	HALOGENATED SOLVENTS	0.45		0.49	
	NON-HALOGENATED SOLVENTS	5.69		6.14	
	PESTICIDES	0.14		0.15	
	OILY SLUDGES	3.33		3.59	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.83		6.29	
	SOIL	3.60		0.00	
	MISCELLANEOUS WASTES	18.11		0.00	
	Total:		69.09	Total:	51.13
92	WASTE OIL	1.99		2.15	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.45		0.49	
	NON-METALLIC INORGANIC LIQUIDS	0.20		0.22	
	SOIL	5.89		0.00	
	MISCELLANEOUS WASTES	2.52		0.00	
	Total:		11.05	Total:	2.86
94	NON-HALOGENATED SOLVENTS	0.10		0.11	
	OILY SLUDGES	2.19		2.36	
	NON-METALLIC INORGANIC LIQUIDS	2.91		3.14	
	MISCELLANEOUS WASTES	28.24		0.00	
	Total:		33.44	Total:	5.61
95	WASTE OIL	1.75		1.89	
	ORGANIC LIQUIDS	0.76		0.82	
	MISCELLANEOUS WASTES	471.58		508.93	
	Total:		474.09	Total:	511.64
96	WASTE OIL	41.96		45.28	
	ORGANIC LIQUIDS	23.31		25.15	
	DIOXINS	2.82		3.05	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	OILY SLUDGES	37.62		40.60	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	22.91		24.72	
	DYE & PAINT SLUDGES AND RESINS	14.97		16.16	
	NON-METALLIC INORGANIC LIQUIDS	0.62		0.67	
	MISCELLANEOUS WASTES	264.84		285.82	
	Total:		409.05	Total:	441.45
97	WASTE OIL	619.78		668.88	
	HALOGENATED SOLVENTS	26.72		28.84	
	NON-HALOGENATED SOLVENTS	109.95		118.66	
	ORGANIC LIQUIDS	130.57		140.92	
	PESTICIDES	0.20		0.22	
	DIOXINS	286.24		308.92	
	OILY SLUDGES	180.63		194.94	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	17.78		19.19	
	DYE & PAINT SLUDGES AND RESINS	237.12		255.90	
	METAL-CONTAINING SLUDGES	0.50		0.54	
	METAL-CONTAINING LIQUIDS	130.28		140.61	
	NON-METALLIC INORGANIC LIQUIDS	269.89		291.27	
	NON-METALLIC INORGANIC SLUDGES	477.46		515.29	
	MISCELLANEOUS WASTES	1007.86		1087.70	
	Total:		3494.98	Total:	3771.88
99	WASTE OIL	453.70		453.70	
	HALOGENATED SOLVENTS	186.28		186.28	
	NON-HALOGENATED SOLVENTS	151.76		151.76	
	ORGANIC LIQUIDS	0.80		0.80	
	DIOXINS	11.43		11.43	
	OILY SLUDGES	29.46		29.46	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.68		0.68	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	20.73		20.73	
	DYE & PAINT SLUDGES AND RESINS	120.14		120.14	
	METAL-CONTAINING LIQUIDS	140.12		140.12	
	CYANIDE & METAL LIQUIDS	6.25		6.25	
	NON-METALLIC INORGANIC LIQUIDS	68.98		68.98	
	NON-METALLIC INORGANIC SLUDGES	9.59		9.59	
	SOIL	126.37		0.00	
	MISCELLANEOUS WASTES	203.49		203.49	
	Total:		1529.78	Total:	1403.41

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN ALAMEDA
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	1,346	1,211	807
Agriculture & Mining	1	1	0
Construction	16	14	9
Manufacturing	56,450	50,805	33,870
Transport, Communication, Utilities	6,991	6,292	4,195
Wholesale Trade	3,564	3,208	2,138
Retail Trade	144	129	86
Finance, Insurance, & Real Estate	62	56	37
Services	12,360	11,124	7,416
Government	3,739	3,365	2,243
TOTALS	84,672	76,205	50,803

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN ALAMEDA
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	23,918	21,526	14,351
Halogenated Solvents	1,640	1,476	984
Non-halogenated Solvents	11,424	10,282	6,854
Organic Liquids	2,304	2,074	1,382
Pesticides	3	3	2
Dioxins	8,279	7,451	4,968
Oily Sludges	4,369	3,932	2,622
Halogenated Organic Sludges & Solids	51	46	30
Non-halogenated Organic Sludges&Solids	2,992	2,693	1,795
Dye & Paint Sludges & Resins	3,738	3,364	2,243
Metal-Containing Sludges	2,148	1,934	1,289
Metal-Containing Liquids	10,460	9,414	6,276
Cyanide & Metal Liquids	55	49	33
Non-metallic Inorganic Liquids	5,454	4,909	3,272
Non-metallic Inorganic Sludges	807	726	484
Contaminated Soil	0	0	0
Miscellaneous Wastes	7,030	6,327	4,218
TOTALS	84,672	76,205	50,803

9/1/88

COUNTY: CONTRACOSTA

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	28	220.36		354.48	
	33	725.33		1025.77	
	34	0.83		1.30	
	42	2.08		3.10	
	48	4.17		7.58	
	49	18.15		40.71	
	94	0.00		0.00	
	97	35.20		40.04	
		Total:	1006.12	Total:	1472.98
112	28	211.14		339.64	
	29	16.90		23.08	
	33	6.25		8.84	
	36	0.00		0.00	
	49	5.72		12.83	
	76	157.36		216.26	
	91	0.00		0.00	
	95	9.74		11.08	
		Total:	407.11	Total:	611.73
113	28	2.50		4.02	
	29	7.58		10.35	
	33	13.76		19.46	
	49	0.40		0.90	
	97	0.00		0.00	
		Total:	24.24	Total:	34.73
121	42	15.87		23.67	
	49	5.08		11.39	
	97	227.26		258.49	
		Total:	248.21	Total:	293.55
122	28	1500.79		2414.20	
	29	132.82		181.41	
	33	54.78		77.47	
	34	1.50		2.35	
	40	19.99		44.28	
	49	6.35		14.24	
	76	1007.25		1384.27	
	94	0.22		0.25	
	95	2.25		2.56	
		Total:	2725.95	Total:	4121.03
123	28	144.45		232.37	
	29	41.85		57.16	
	34	73.79		115.59	
	36	3.45		9.68	
		Total:	263.54	Total:	414.80
131	28	434.99		699.73	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	29	9.50		12.98	
	94	0.56		0.64	
	95	0.20		0.23	
	97	0.45		0.51	
		Total:	445.70	Total:	714.09
132	28	128.56		206.80	
	29	7226.80		9870.73	
	33	4.17		5.90	
	34	48.93		76.65	
	36	53.60		150.42	
	49	100.37		225.12	
	55	607.42		966.93	
	73	17.09		51.18	
		Total:	8186.94	Total:	11553.73
133	17	6.25		10.47	
	29	753.18		1028.73	
	36	10.76		30.20	
		Total:	770.19	Total:	1069.40
134	28	86.40		138.98	
	29	357.66		488.51	
	34	22.51		35.26	
	42	4.58		6.83	
	49	13.45		30.17	
	55	31.27		49.78	
	75	4.17		5.73	
	76	31.27		42.97	
	82	6.88		10.90	
	95	3.33		3.79	
		Total:	561.52	Total:	812.92
135	17	61.36		102.76	
	27	0.45		0.84	
	28	1277.30		2054.69	
	29	106.83		145.91	
	36	0.00		0.00	
	49	187.55		420.65	
	65	5.14		9.87	
	87	20.85		0.00	
		Total:	1659.48	Total:	2734.72
141	29	253.71		346.53	
	49	0.55		1.23	
	55	1170.25		1862.87	
		Total:	1424.51	Total:	2210.63
151	17	3.51		0.00	
	26	11.79		0.00	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	28	525.90		0.00	
	29	957.18		0.00	
	33	23.10		0.00	
	36	5.89		0.00	
	48	9.26		0.00	
	49	1813.52		0.00	
	55	76.71		0.00	
	57	3.36		0.00	
	82	9.26		0.00	
	89	3.37		0.00	
	91	1.68		0.00	
	92	0.00		0.00	
	94	0.84		0.00	
	95	17.69		0.00	
	97	7.44		0.00	
		Total:	3470.50	Total:	0.00
161	29	2340.48		3196.75	
		Total:	2340.48	Total:	3196.75
162	28	93.03		149.65	
	29	5148.97		7032.72	
	97	0.17		0.19	
		Total:	5242.17	Total:	7182.56
171	34	176.70		276.79	
	36	240.98		676.29	
		Total:	417.68	Total:	953.08
172	37	0.07		0.18	
	55	160.06		254.79	
		Total:	160.13	Total:	254.97
181	26	8.21		4.40	
	28	238.79		384.12	
	29	4564.09		6233.86	
	34	91.25		142.94	
	49	14065.90		31547.77	
	55	16.90		26.90	
	82	0.84		1.33	
	95	0.30		0.34	
	97	132.50		150.71	
		Total:	19118.78	Total:	38492.37
211	15	2.05		3.43	
	26	13.76		7.38	
	27	2.06		3.83	
	28	333.90		537.12	
	34	2.73		4.28	
	36	5.36		15.04	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	38	2.60		6.49	
	49	5.93		13.30	
	72	0.46		0.63	
	73	0.12		0.36	
	76	0.91		1.25	
	91	1.36		1.55	
	95	1.32		1.50	
	97	0.18		0.20	
		Total:	372.74	Total:	596.36
212	15	0.22		0.37	
	28	11.06		17.79	
	29	0.45		0.61	
	34	24.84		38.91	
	37	0.22		0.58	
	38	0.44		1.10	
	49	0.29		0.65	
	54	0.45		0.72	
	76	1.14		1.57	
	80	1.24		1.97	
	82	1.04		1.65	
	91	9.34		10.62	
	95	0.80		0.91	
		Total:	51.53	Total:	77.45
213	26	0.89		0.48	
	28	4.60		7.40	
	29	4.47		6.11	
	38	1.59		3.97	
	42	2.29		3.42	
	49	5.43		12.18	
	75	0.22		0.30	
	87	2.60		0.00	
	94	0.60		0.68	
	95	30.77		35.00	
		Total:	53.46	Total:	69.54
214	15	1.37		2.29	
	20	5.72		5.72	
	25	2.04		1.09	
	27	0.91		1.69	
	28	1067.69		1717.51	
	29	175.85		240.18	
	34	51.05		79.97	
	36	21.34		59.89	
	37	0.89		2.34	
	38	0.44		1.10	
	49	4.56		10.23	
	51	0.88		1.33	
	55	12.25		19.50	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	60	27.97		53.72	
	75	74.25		102.04	
	91	2.08		2.37	
	95	20.82		23.68	
	97	8.99		10.23	
		Total:	1479.10	Total:	2334.88
221	17	8.86		14.84	
	20	2.40		2.40	
	26	1.32		0.71	
	28	125.03		201.13	
	29	10841.81		14808.29	
	30	3.75		4.89	
	33	791.07		1118.74	
	34	10.16		15.91	
	36	4.58		12.85	
	38	0.20		0.50	
	42	25.53		38.07	
	49	4271.29		9579.88	
	75	0.88		1.21	
	80	4.16		6.61	
	87	40.10		0.00	
	91	2.67		3.04	
	95	6.05		6.88	
	97	31.68		36.03	
	99	5.27		5.27	
		Total:	16176.81	Total:	25857.25
222	26	150.87		80.90	
	28	4.63		7.45	
	29	5557.00		7590.03	
	34	18.76		29.39	
	46	17.51		38.79	
	49	146.56		328.71	
	54	5.83		9.28	
	75	2.08		2.86	
	82	4.17		6.61	
	87	4.58		0.00	
	97	6.25		7.11	
		Total:	5918.24	Total:	8101.13
223	28	5.27		8.48	
	29	2302.83		3145.32	
	32	2.52		2.48	
	33	16.33		23.09	
	34	71.91		112.64	
	42	5.84		8.71	
	49	454.25		1018.82	
	54	2.52		4.01	
	87	72.38		0.00	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	91	0.00		0.00	
	95	5.83		6.63	
	97	4.32		4.91	
		Total:	2944.00	Total:	4335.09
231	28	20.01		32.19	
		Total:	20.01	Total:	32.19
232	28	684.04		1100.36	
	73	0.21		0.63	
	82	0.45		0.71	
		Total:	684.70	Total:	1101.70
241	28	41.47		66.71	
	29	4070.10		5559.15	
	32	42.31		41.69	
	34	111.06		173.97	
	40	43.34		96.00	
	42	182.41		272.03	
	49	63.24		141.84	
	72	11.63		15.98	
	75	19.59		26.92	
	87	300.84		0.00	
	95	1.45		1.65	
	97	3.12		3.55	
		Total:	4890.56	Total:	6399.49
251	28	2418.04		3889.71	
		Total:	2418.04	Total:	3889.71
252	28	53.71		86.40	
		Total:	53.71	Total:	86.40
261	15	2.48		4.15	
	26	0.11		0.06	
	28	76.82		123.57	
	29	15.27		20.86	
	32	2.75		2.71	
	49	66.36		148.84	
	55	35.19		56.02	
	73	5.02		15.03	
	95	1.29		1.47	
	97	3.55		4.04	
		Total:	208.84	Total:	376.75
272	28	2.19		3.52	
	38	5.25		13.09	
	95	6.50		7.39	
		Total:	13.94	Total:	24.00

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
281	28	94.56		152.11	
	37	0.76		2.00	
		Total:	95.32	Total:	154.11
291	28	4.17		6.71	
	29	0.22		0.30	
	97	1.14		1.30	
		Total:	5.53	Total:	8.31
311	28	1.62		2.61	
		Total:	1.62	Total:	2.61
321	29	610.05		833.24	
		Total:	610.05	Total:	833.24
322	91	0.05		0.06	
	95	16.82		19.13	
		Total:	16.87	Total:	19.19
331	28	19.50		31.37	
	29	86.11		117.61	
	49	31.61		70.90	
	75	1.36		1.87	
	94	0.00		0.00	
	95	0.20		0.23	
		Total:	138.78	Total:	221.98
342	29	75.04		102.49	
	55	2.91		4.63	
		Total:	77.95	Total:	107.12
343	28	815.64		1312.05	
	29	42.09		57.49	
	33	1.25		1.77	
	48	16.07		29.23	
	49	157.52		353.29	
	51	48.20		72.73	
	87	55.33		0.00	
	95	0.25		0.28	
		Total:	1136.35	Total:	1826.84
351	28	1.14		1.83	
		Total:	1.14	Total:	1.83
352	17	25.50		42.70	
	26	7.79		4.18	
	28	241.15		387.92	
	29	494.74		675.74	
	42	0.15		0.22	
	46	16.85		37.32	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	87.44		196.12	
	87	0.45		0.00	
	95	1.78		2.02	
	97	2.25		2.56	
	99	67.27		67.27	
		Total:	945.37	Total:	1416.05
421	28	3.37		5.42	
	95	4.05		4.61	
		Total:	7.42	Total:	10.03
431	49	15.01		33.67	
		Total:	15.01	Total:	33.67
441	29	7.63		10.42	
		Total:	7.63	Total:	10.42
451	36	6.86		19.25	
	37	9.89		26.02	
	78	0.08		0.16	
		Total:	16.83	Total:	45.43
461	26	2.04		1.09	
	28	0.80		1.29	
	34	57.87		90.65	
	36	21.68		60.84	
	49	0.50		1.12	
	75	0.44		0.60	
	80	0.83		1.32	
	95	18.91		21.51	
		Total:	103.07	Total:	178.42
481	28	1946.05		3130.45	
	46	10.42		23.08	
		Total:	1956.47	Total:	3153.53
491	28	96.12		154.62	
	29	1238.99		1692.27	
	49	21.56		48.36	
	73	0.42		1.26	
	95	0.45		0.51	
		Total:	1357.54	Total:	1897.02
511	28	235.97		379.59	
		Total:	235.97	Total:	379.59
512	28	709.44		1141.22	
	29	789.15		1077.86	
	36	0.01		0.03	
	49	32.31		72.47	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	50	50.04		75.51	
	54	108.42		172.59	
	55	119.27		189.86	
	95	10.11		11.50	
	97	6.19		7.04	
		Total:	1824.94	Total:	2748.08
513	28	605.97		974.78	
	29	0.17		0.23	
	37	1.51		3.97	
	49	591.36		1326.33	
	95	15.17		17.25	
	97	5.61		6.38	
		Total:	1219.79	Total:	2328.94
521	49	18.48		41.45	
	87	8.75		0.00	
		Total:	27.23	Total:	41.45
551	17	5.88		9.85	
	28	493.69		794.16	
	29	7.14		9.75	
	36	0.28		0.79	
	38	3.81		9.50	
	49	2.27		5.09	
	73	4.58		13.71	
	80	1.33		2.11	
	82	1.19		1.89	
	91	0.59		0.67	
	94	1.70		1.93	
	95	68.92		78.39	
		Total:	591.38	Total:	927.84
571	28	5.05		8.12	
	29	1319.44		1802.16	
	49	53.81		120.69	
		Total:	1378.30	Total:	1930.97
581	28	4724.36		7599.70	
	49	515.85		1156.98	
	87	8.54		0.00	
		Total:	5248.75	Total:	8756.68
591	28	1.93		3.10	
		Total:	1.93	Total:	3.10
611	28	623.36		0.00	
	29	6495.46		0.00	
	32	5.89		0.00	
	34	9.27		0.00	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	41	0.80		0.00	
	44	10.84		0.00	
	49	551.53		0.00	
	51	1.68		0.00	
	55	12.64		0.00	
	73	2.94		0.00	
	87	172.70		0.00	
	92	0.42		0.00	
	95	1.32		0.00	
	97	42.10		0.00	
		Total:	7930.95	Total:	0.00
612	49	23.77		53.31	
	54	0.15		0.24	
	95	0.45		0.51	
		Total:	24.37	Total:	54.06
721	28	489.48		787.39	
		Total:	489.48	Total:	787.39
723	29	115.63		157.93	
	33	835.20		1181.15	
		Total:	950.83	Total:	1339.08
725	28	0.42		0.68	
	49	0.57		1.28	
	55	0.04		0.06	
		Total:	1.03	Total:	2.02
728	73	0.91		2.72	
		Total:	0.91	Total:	2.72
731	28	13.95		22.44	
	29	0.65		0.89	
	49	66.10		148.25	
	73	1.84		5.51	
		Total:	82.54	Total:	177.09
741	28	4.17		6.71	
	29	18.76		25.62	
		Total:	22.93	Total:	32.33
791	28	22.76		36.61	
	33	10.46		14.79	
		Total:	33.22	Total:	51.40
			-----		-----
		Total:	110316.43	Total:	158888.52

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	16176.81		25857.25	
	223	2944.00		4335.09	
		Total:	19120.81	Total:	30192.34
HALOGENATED SOLVENTS	211	372.74		596.36	
	741	22.93		32.33	
		Total:	395.67	Total:	628.69
NON-HALOGENATED SOLVENTS	212	51.53		77.45	
	213	53.46		69.54	
	214	1479.10		2334.88	
		Total:	1584.09	Total:	2481.87
ORGANIC LIQUIDS	133	770.19		1069.40	
	134	561.52		812.92	
	342	77.95		107.12	
	343	1136.35		1826.84	
		Total:	2546.01	Total:	3816.28
PESTICIDES	231	20.01		32.19	
	232	684.70		1101.70	
		Total:	704.71	Total:	1133.89
DIOXINS	261	208.84		376.75	
	731	82.54		177.09	
		Total:	291.38	Total:	553.84
OILY SLUDGES	222	5918.24		8101.13	
	352	945.37		1416.05	
	481	1956.47		3153.53	
		Total:	8820.08	Total:	12670.71
HALOGENATED ORGANIC SLUDGES & SOLIDS	251	2418.04		3889.71	
	351	1.14		1.83	
	451	16.83		45.43	
		Total:	2436.01	Total:	3936.97
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	4890.56		6399.49	
	252	53.71		86.40	
	321	610.05		833.24	
	491	1357.54		1897.02	
	571	1378.30		1930.97	
		Total:	8290.16	Total:	11147.12
DYE & PAINT SLUDGES AND RESINS	272	13.94		24.00	
	281	95.32		154.11	
	291	5.53		8.31	
	461	103.07		178.42	
		Total:	217.86	Total:	364.84

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
METAL-CONTAINING SLUDGES	171	417.68		953.08	
		Total:	417.68	Total:	953.08
METAL-CONTAINING LIQUIDS	111	1006.12		1472.98	
	121	248.21		293.55	
	132	8186.94		11553.73	
	721	489.48		787.39	
	723	950.83		1339.08	
	725	1.03		2.02	
	728	0.91		2.72	
		Total:	10883.52	Total:	15451.47
NON-METALLIC INORGANIC LIQUIDS	112	407.11		611.73	
	113	24.24		34.73	
	122	2725.95		4121.03	
	123	263.54		414.80	
	131	445.70		714.09	
	135	1659.48		2734.72	
	791	33.22		51.40	
		Total:	5559.24	Total:	8682.50
NON-METALLIC INORGANIC SLUDGES	421	7.42		10.03	
	431	15.01		33.67	
	441	7.63		10.42	
	521	27.23		41.45	
		Total:	57.29	Total:	95.57
SOIL	611	7930.95		0.00	
		Total:	7930.95	Total:	0.00
MISCELLANEOUS WASTES	141	1424.51		2210.63	
	151	3470.50		0.00	
	161	2340.48		3196.75	
	162	5242.17		7182.56	
	172	160.13		254.97	
	181	19118.78		38492.37	
	311	1.62		2.61	
	322	16.87		19.19	
	331	138.78		221.98	
	511	235.97		379.59	
	512	1824.94		2748.08	
	513	1219.79		2328.94	
	551	591.38		927.84	
	581	5248.75		8756.68	
	591	1.93		3.10	
	612	24.37		54.06	
		Total:	41060.97	Total:	66779.35

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
15	211	2.05		3.43	
	212	0.22		0.37	
	214	1.37		2.29	
	261	2.48		4.15	
	Total:		6.12	Total:	10.24
17	133	6.25		10.47	
	135	61.36		102.76	
	151	3.51		0.00	
	221	8.86		14.84	
	352	25.50		42.70	
	551	5.88		9.85	
	Total:		111.36	Total:	180.62
20	214	5.72		5.72	
	221	2.40		2.40	
	Total:		8.12	Total:	8.12
25	214	2.04		1.09	
	Total:		2.04	Total:	1.09
26	151	11.79		0.00	
	181	8.21		4.40	
	211	13.76		7.38	
	213	0.89		0.48	
	221	1.32		0.71	
	222	150.87		80.90	
	261	0.11		0.06	
	352	7.79		4.18	
	461	2.04		1.09	
	Total:		196.78	Total:	99.20
27	135	0.45		0.84	
	211	2.06		3.83	
	214	0.91		1.69	
	Total:		3.42	Total:	6.36
28	111	220.36		354.48	
	112	211.14		339.64	
	113	2.50		4.02	
	122	1500.79		2414.20	
	123	144.45		232.37	
	131	434.99		699.73	
	132	128.56		206.80	
	134	86.40		138.98	
	135	1277.30		2054.69	
	151	525.90		0.00	
	162	93.03		149.65	
	181	238.79		384.12	
	211	333.90		537.12	
	212	11.06		17.79	
	213	4.60		7.40	
	214	1067.69		1717.51	
	221	125.03		201.13	
	222	4.63		7.45	
	223	5.27		8.48	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	231	20.01		32.19	
	232	684.04		1100.36	
	241	41.47		66.71	
	251	2418.04		3889.71	
	252	53.71		86.40	
	261	76.82		123.57	
	272	2.19		3.52	
	281	94.56		152.11	
	291	4.17		6.71	
	311	1.62		2.61	
	331	19.50		31.37	
	343	815.64		1312.05	
	351	1.14		1.83	
	352	241.15		387.92	
	421	3.37		5.42	
	461	0.80		1.29	
	481	1946.05		3130.45	
	491	96.12		154.62	
	511	235.97		379.59	
	512	709.44		1141.22	
	513	605.97		974.78	
	551	493.69		794.16	
	571	5.05		8.12	
	581	4724.36		7599.70	
	591	1.93		3.10	
	611	623.36		0.00	
	721	489.48		787.39	
	725	0.42		0.68	
	731	13.95		22.44	
	741	4.17		6.71	
	791	22.76		36.61	
		Total:	20867.34	Total:	31718.90
29	112	16.90		23.08	
	113	7.58		10.35	
	122	132.82		181.41	
	123	41.85		57.16	
	131	9.50		12.98	
	132	7226.80		9870.73	
	133	753.18		1028.73	
	134	357.66		488.51	
	135	106.83		145.91	
	141	253.71		346.53	
	151	957.18		0.00	
	161	2340.48		3196.75	
	162	5148.97		7032.72	
	181	4564.09		6233.86	
	212	0.45		0.61	
	213	4.47		6.11	
	214	175.85		240.18	
	221	10841.81		14808.29	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	222	5557.00		7590.03	
	223	2302.83		3145.32	
	241	4070.10		5559.15	
	261	15.27		20.86	
	291	0.22		0.30	
	321	610.05		833.24	
	331	86.11		117.61	
	342	75.04		102.49	
	343	42.09		57.49	
	352	494.74		675.74	
	441	7.63		10.42	
	491	1238.99		1692.27	
	512	789.15		1077.86	
	513	0.17		0.23	
	551	7.14		9.75	
	571	1319.44		1802.16	
	611	6495.46		0.00	
	723	115.63		157.93	
	731	0.65		0.89	
	741	18.76		25.62	
		Total:	56186.60	Total:	66563.27
30	221	3.75		4.89	
		Total:	3.75	Total:	4.89
32	223	2.52		2.48	
	241	42.31		41.69	
	261	2.75		2.71	
	611	5.89		0.00	
		Total:	53.47	Total:	46.88
33	111	725.33		1025.77	
	112	6.25		8.84	
	113	13.76		19.46	
	122	54.78		77.47	
	132	4.17		5.90	
	151	23.10		0.00	
	221	791.07		1118.74	
	223	16.33		23.09	
	343	1.25		1.77	
	723	835.20		1181.15	
	791	10.46		14.79	
		Total:	2481.70	Total:	3476.98
34	111	0.83		1.30	
	122	1.50		2.35	
	123	73.79		115.59	
	132	48.93		76.65	
	134	22.51		35.26	
	171	176.70		276.79	
	181	91.25		142.94	
	211	2.73		4.28	
	212	24.84		38.91	
	214	51.05		79.97	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	221	10.16		15.91	
	222	18.76		29.39	
	223	71.91		112.64	
	241	111.06		173.97	
	461	57.87		90.65	
	611	9.27		0.00	
	Total:		773.16	Total:	1196.60
36	112	0.00		0.00	
	123	3.45		9.68	
	132	53.60		150.42	
	133	10.76		30.20	
	135	0.00		0.00	
	151	5.89		0.00	
	171	240.98		676.29	
	211	5.36		15.04	
	214	21.34		59.89	
	221	4.58		12.85	
	451	6.86		19.25	
	461	21.68		60.84	
	512	0.01		0.03	
	551	0.28		0.79	
	Total:		374.79	Total:	1035.28
37	172	0.07		0.18	
	212	0.22		0.58	
	214	0.89		2.34	
	281	0.76		2.00	
	451	9.89		26.02	
	513	1.51		3.97	
	Total:		13.34	Total:	35.09
38	211	2.60		6.49	
	212	0.44		1.10	
	213	1.59		3.97	
	214	0.44		1.10	
	221	0.20		0.50	
	272	5.25		13.09	
	551	3.81		9.50	
	Total:		14.33	Total:	35.75
40	122	19.99		44.28	
	241	43.34		96.00	
	Total:		63.33	Total:	140.28
41	611	0.80		0.00	
	Total:		0.80	Total:	0.00
42	111	2.08		3.10	
	121	15.87		23.67	
	134	4.58		6.83	
	213	2.29		3.42	
	221	25.53		38.07	
	223	5.84		8.71	
	241	182.41		272.03	
	352	0.15		0.22	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	238.75	Total:	356.05
44	611	10.84		0.00	
		Total:	10.84	Total:	0.00
46	222	17.51		38.79	
	352	16.85		37.32	
	481	10.42		23.08	
		Total:	44.78	Total:	99.19
48	111	4.17		7.58	
	151	9.26		0.00	
	343	16.07		29.23	
		Total:	29.50	Total:	36.81
49	111	18.15		40.71	
	112	5.72		12.83	
	113	0.40		0.90	
	121	5.08		11.39	
	122	6.35		14.24	
	132	100.37		225.12	
	134	13.45		30.17	
	135	187.55		420.65	
	141	0.55		1.23	
	151	1813.52		0.00	
	181	14065.90		31547.77	
	211	5.93		13.30	
	212	0.29		0.65	
	213	5.43		12.18	
	214	4.56		10.23	
	221	4271.29		9579.88	
	222	146.56		328.71	
	223	454.25		1018.82	
	241	63.24		141.84	
	261	66.36		148.84	
	331	31.61		70.90	
	343	157.52		353.29	
	352	87.44		196.12	
	431	15.01		33.67	
	461	0.50		1.12	
	491	21.56		48.36	
	512	32.31		72.47	
	513	591.36		1326.33	
	521	18.48		41.45	
	551	2.27		5.09	
	571	53.81		120.69	
	581	515.85		1156.98	
	611	551.53		0.00	
	612	23.77		53.31	
	725	0.57		1.28	
	731	66.10		148.25	
		Total:	23404.64	Total:	47188.77
50	512	50.04		75.51	
		Total:	50.04	Total:	75.51

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
51	214	0.88		1.33	
	343	48.20		72.73	
	611	1.68		0.00	
	Total:		50.76	Total:	74.06
54	212	0.45		0.72	
	222	5.83		9.28	
	223	2.52		4.01	
	512	108.42		172.59	
	612	0.15		0.24	
	Total:		117.37	Total:	186.84
55	132	607.42		966.93	
	134	31.27		49.78	
	141	1170.25		1862.87	
	151	76.71		0.00	
	172	160.06		254.79	
	181	16.90		26.90	
	214	12.25		19.50	
	261	35.19		56.02	
	342	2.91		4.63	
	512	119.27		189.86	
	611	12.64		0.00	
	725	0.04		0.06	
	Total:		2244.91	Total:	3431.34
57	151	3.36		0.00	
	Total:		3.36	Total:	0.00
60	214	27.97		53.72	
	Total:		27.97	Total:	53.72
65	135	5.14		9.87	
	Total:		5.14	Total:	9.87
72	211	0.46		0.63	
	241	11.63		15.98	
	Total:		12.09	Total:	16.61
73	132	17.09		51.18	
	211	0.12		0.36	
	232	0.21		0.63	
	261	5.02		15.03	
	491	0.42		1.26	
	551	4.58		13.71	
	611	2.94		0.00	
	728	0.91		2.72	
	731	1.84		5.51	
	Total:		33.13	Total:	90.40
75	134	4.17		5.73	
	213	0.22		0.30	
	214	74.25		102.04	
	221	0.88		1.21	
	222	2.08		2.86	
	241	19.59		26.92	
	331	1.36		1.87	
	461	0.44		0.60	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	102.99	Total:	141.53
76	112	157.36		216.26	
	122	1007.25		1384.27	
	134	31.27		42.97	
	211	0.91		1.25	
	212	1.14		1.57	
		Total:	1197.93	Total:	1646.32
78	451	0.08		0.16	
		Total:	0.08	Total:	0.16
80	212	1.24		1.97	
	221	4.16		6.61	
	461	0.83		1.32	
	551	1.33		2.11	
		Total:	7.56	Total:	12.01
82	134	6.88		10.90	
	151	9.26		0.00	
	181	0.84		1.33	
	212	1.04		1.65	
	222	4.17		6.61	
	232	0.45		0.71	
	551	1.19		1.89	
		Total:	23.83	Total:	23.09
87	135	20.85		0.00	
	213	2.60		0.00	
	221	40.10		0.00	
	222	4.58		0.00	
	223	72.38		0.00	
	241	300.84		0.00	
	343	55.33		0.00	
	352	0.45		0.00	
	521	8.75		0.00	
	581	8.54		0.00	
	611	172.70		0.00	
		Total:	687.12	Total:	0.00
89	151	3.37		0.00	
		Total:	3.37	Total:	0.00
91	112	0.00		0.00	
	151	1.68		0.00	
	211	1.36		1.55	
	212	9.34		10.62	
	214	2.08		2.37	
	221	2.67		3.04	
	223	0.00		0.00	
	322	0.05		0.06	
	551	0.59		0.67	
		Total:	17.77	Total:	18.31
92	151	0.00		0.00	
	611	0.42		0.00	
		Total:	0.42	Total:	0.00
94	111	0.00		0.00	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	122	0.22		0.25	
	131	0.56		0.64	
	151	0.84		0.00	
	213	0.60		0.68	
	331	0.00		0.00	
	551	1.70		1.93	
		Total:	3.92	Total:	3.50
95	112	9.74		11.08	
	122	2.25		2.56	
	131	0.20		0.23	
	134	3.33		3.79	
	151	17.69		0.00	
	181	0.30		0.34	
	211	1.32		1.50	
	212	0.80		0.91	
	213	30.77		35.00	
	214	20.82		23.68	
	221	6.05		6.88	
	223	5.83		6.63	
	241	1.45		1.65	
	261	1.29		1.47	
	272	6.50		7.39	
	322	16.82		19.13	
	331	0.20		0.23	
	343	0.25		0.28	
	352	1.78		2.02	
	421	4.05		4.61	
	461	18.91		21.51	
	491	0.45		0.51	
	512	10.11		11.50	
	513	15.17		17.25	
	551	68.92		78.39	
	611	1.32		0.00	
	612	0.45		0.51	
		Total:	246.77	Total:	259.05
97	111	35.20		40.04	
	113	0.00		0.00	
	121	227.26		258.49	
	131	0.45		0.51	
	151	7.44		0.00	
	162	0.17		0.19	
	181	132.50		150.71	
	211	0.18		0.20	
	214	8.99		10.23	
	221	31.68		36.03	
	222	6.25		7.11	
	223	4.32		4.91	
	241	3.12		3.55	
	261	3.55		4.04	
	291	1.14		1.30	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	2.25		2.56	
	512	6.19		7.04	
	513	5.61		6.38	
	611	42.10		0.00	
		Total:	518.40	Total:	533.29
99	221	5.27		5.27	
	352	67.27		67.27	
		Total:	72.54	Total:	72.54

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	221	5.27		5.27	
	352	67.27		67.27	
		Total:	72.54	Total:	72.54
Construction	133	6.25		10.47	
	135	61.36		102.76	
	151	3.51		0.00	
	211	2.05		3.43	
	212	0.22		0.37	
	214	1.37		2.29	
	221	8.86		14.84	
	261	2.48		4.15	
	352	25.50		42.70	
	551	5.88		9.85	
		Total:	117.48	Total:	190.86
Manufacturing	111	946.52		1381.55	
	112	234.29		371.56	
	113	23.84		33.83	
	122	1689.89		2675.43	
	123	263.54		414.80	
	131	444.49		712.71	
	132	7462.06		10310.50	
	133	763.94		1058.93	
	134	466.57		662.75	
	135	1384.58		2201.44	
	141	253.71		346.53	
	151	1523.86		0.00	
	161	2340.48		3196.75	
	162	5242.00		7182.37	
	171	417.68		953.08	
	172	0.07		0.18	
	181	4902.34		6765.32	
	211	360.41		574.14	
	212	37.01		58.99	
	213	11.55		17.96	
	214	1325.93		2109.49	
	221	11780.32		16165.42	
	222	5731.26		7707.77	
	223	2398.86		3292.01	
	231	20.01		32.19	
	232	684.04		1100.36	
	241	4264.94		5841.52	
	251	2418.04		3889.71	
	252	53.71		86.40	
	261	94.95		147.20	
	272	7.44		16.61	
	281	95.32		154.11	
	291	4.39		7.01	
	311	1.62		2.61	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	321	610.05		833.24	
	331	105.61		148.98	
	342	75.04		102.49	
	343	858.98		1371.31	
	351	1.14		1.83	
	352	743.68		1067.84	
	421	3.37		5.42	
	441	7.63		10.42	
	451	16.75		45.27	
	461	82.39		153.87	
	481	1946.05		3130.45	
	491	1335.11		1846.89	
	511	235.97		379.59	
	512	1498.60		2219.11	
	513	607.65		978.98	
	551	504.92		814.20	
	571	1324.49		1810.28	
	581	4724.36		7599.70	
	591	1.93		3.10	
	611	7133.98		0.00	
	721	489.48		787.39	
	723	950.83		1339.08	
	725	0.42		0.68	
	731	14.60		23.33	
	741	22.93		32.33	
	791	33.22		51.40	
		Total:	80978.84	Total:	104228.41
Transportation, Communication, Utilities	111	24.40		51.39	
	112	5.72		12.83	
	113	0.40		0.90	
	121	20.95		35.06	
	122	26.34		58.52	
	132	100.37		225.12	
	134	18.03		37.00	
	135	187.55		420.65	
	141	0.55		1.23	
	151	1822.78		0.00	
	181	14065.90		31547.77	
	211	5.93		13.30	
	212	0.29		0.65	
	213	7.72		15.60	
	214	4.56		10.23	
	221	4296.82		9617.95	
	222	164.07		367.50	
	223	460.09		1027.53	
	241	288.99		509.87	
	261	66.36		148.84	
	331	31.61		70.90	
	343	173.59		382.52	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	104.44		233.66	
	431	15.01		33.67	
	461	0.50		1.12	
	481	10.42		23.08	
	491	21.56		48.36	
	512	32.31		72.47	
	513	591.36		1326.33	
	521	18.48		41.45	
	551	2.27		5.09	
	571	53.81		120.69	
	581	515.85		1156.98	
	611	563.17		0.00	
	612	23.77		53.31	
	725	0.57		1.28	
	731	66.10		148.25	
		Total:	23792.64	Total:	47821.10
Wholesale Trade	214	0.88		1.33	
	343	48.20		72.73	
	512	50.04		75.51	
	611	1.68		0.00	
		Total:	100.80	Total:	149.57
Retail Trade	132	607.42		966.93	
	134	31.27		49.78	
	141	1170.25		1862.87	
	151	80.07		0.00	
	172	160.06		254.79	
	181	16.90		26.90	
	212	0.45		0.72	
	214	12.25		19.50	
	222	5.83		9.28	
	223	2.52		4.01	
	261	35.19		56.02	
	342	2.91		4.63	
	512	227.69		362.45	
	611	12.64		0.00	
	612	0.15		0.24	
	725	0.04		0.06	
		Total:	2365.64	Total:	3618.18
Finance, Insurance & Real Estate	135	5.14		9.87	
	214	27.97		53.72	
		Total:	33.11	Total:	63.59
Services	112	157.36		216.26	
	122	1007.25		1384.27	
	132	17.09		51.18	
	134	42.32		59.60	
	135	20.85		0.00	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	151	12.63		0.00	
	181	0.84		1.33	
	211	1.49		2.24	
	212	3.42		5.19	
	213	2.82		0.30	
	214	74.25		102.04	
	221	45.14		7.82	
	222	10.83		9.47	
	223	72.38		0.00	
	232	0.66		1.34	
	241	332.06		42.90	
	261	5.02		15.03	
	331	1.36		1.87	
	343	55.33		0.00	
	352	0.45		0.00	
	451	0.08		0.16	
	461	1.27		1.92	
	491	0.42		1.26	
	521	8.75		0.00	
	551	7.10		17.71	
	581	8.54		0.00	
	611	175.64		0.00	
	728	0.91		2.72	
	731	1.84		5.51	
		Total:	2068.10	Total:	1930.12
Government	111	35.20		40.04	
	112	9.74		11.08	
	113	0.00		0.00	
	121	227.26		258.49	
	122	2.47		2.81	
	131	1.21		1.38	
	134	3.33		3.79	
	151	27.65		0.00	
	162	0.17		0.19	
	181	132.80		151.05	
	211	2.86		3.25	
	212	10.14		11.53	
	213	31.37		35.68	
	214	31.89		36.28	
	221	40.40		45.95	
	222	6.25		7.11	
	223	10.15		11.54	
	241	4.57		5.20	
	261	4.84		5.51	
	272	6.50		7.39	
	291	1.14		1.30	
	322	16.87		19.19	
	331	0.20		0.23	
	343	0.25		0.28	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	4.03		4.58	
	421	4.05		4.61	
	461	18.91		21.51	
	491	0.45		0.51	
	512	16.30		18.54	
	513	20.78		23.63	
	551	71.21		80.99	
	611	43.84		0.00	
	612	0.45		0.51	
		Total:	787.28	Total:	814.15

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
15	HALOGENATED SOLVENTS	2.05		3.43	
	NON-HALOGENATED SOLVENTS	1.59		2.66	
	DIOXINS	2.48		4.15	
	Total:		6.12	Total:	10.24
17	WASTE OIL	8.86		14.84	
	ORGANIC LIQUIDS	6.25		10.47	
	OILY SLUDGES	25.50		42.70	
	NON-METALLIC INORGANIC LIQUIDS	61.36		102.76	
	MISCELLANEOUS WASTES	9.39		0.00	
	Total:		111.36	Total:	170.77
20	WASTE OIL	2.40		2.40	
	NON-HALOGENATED SOLVENTS	7.76		6.81	
	Total:		10.16	Total:	9.21
26	WASTE OIL	1.32		0.71	
	HALOGENATED SOLVENTS	13.76		7.38	
	NON-HALOGENATED SOLVENTS	0.89		0.48	
	DIOXINS	0.11		0.06	
	OILY SLUDGES	158.66		85.08	
	DYE & PAINT SLUDGES AND RESINS	2.04		1.09	
	MISCELLANEOUS WASTES	20.00		0.00	
	Total:		196.78	Total:	94.80
27	HALOGENATED SOLVENTS	2.06		3.83	
	NON-HALOGENATED SOLVENTS	0.91		1.69	
	NON-METALLIC INORGANIC LIQUIDS	0.45		0.84	
	Total:		3.42	Total:	6.36
28	WASTE OIL	130.30		209.61	
	HALOGENATED SOLVENTS	338.07		543.83	
	NON-HALOGENATED SOLVENTS	1083.35		1742.70	
	ORGANIC LIQUIDS	902.04		1451.03	
	PESTICIDES	704.05		1132.55	
	DIOXINS	90.77		146.01	
	OILY SLUDGES	2191.83		3525.82	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	2419.18		3891.54	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	196.35		315.85	
	DYE & PAINT SLUDGES AND RESINS	101.72		163.63	
	METAL-CONTAINING LIQUIDS	838.82		1349.35	
	NON-METALLIC INORGANIC LIQUIDS	3593.93		5781.26	
	NON-METALLIC INORGANIC SLUDGES	3.37		5.42	
	SOIL	623.36		0.00	
	MISCELLANEOUS WASTES	7650.20		0.00	
	Total:		20867.34	Total:	20258.60
29	WASTE OIL	13144.64		17953.61	
	HALOGENATED SOLVENTS	18.76		25.62	
	NON-HALOGENATED SOLVENTS	180.77		246.90	
	ORGANIC LIQUIDS	1227.97		1677.22	
	DIOXINS	15.92		21.75	
	OILY SLUDGES	6051.74		8265.77	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	7238.58		9886.82	
	DYE & PAINT SLUDGES AND RESINS	0.22		0.30	
	METAL-CONTAINING LIQUIDS	7342.43		10028.66	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-METALLIC INORGANIC LIQUIDS	315.48		430.89	
	NON-METALLIC INORGANIC SLUDGES	7.63		10.42	
	SOIL	6495.46		0.00	
	MISCELLANEOUS WASTES	14147.00		19322.67	
	Total:		56186.60	Total:	67870.63
30	WASTE OIL	6.27		7.37	
	Total:		6.27	Total:	7.37
32	DIOXINS	2.75		2.71	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	42.31		41.69	
	SOIL	5.89		0.00	
	Total:		50.95	Total:	44.40
33	WASTE OIL	807.40		1141.83	
	ORGANIC LIQUIDS	1.25		1.77	
	METAL-CONTAINING LIQUIDS	1564.70		2212.82	
	NON-METALLIC INORGANIC LIQUIDS	85.25		120.56	
	MISCELLANEOUS WASTES	23.10		0.00	
	Total:		2481.70	Total:	3476.98
34	WASTE OIL	82.07		128.55	
	HALOGENATED SOLVENTS	2.73		4.28	
	NON-HALOGENATED SOLVENTS	75.89		118.88	
	ORGANIC LIQUIDS	22.51		35.26	
	OILY SLUDGES	18.76		29.39	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	111.06		173.97	
	DYE & PAINT SLUDGES AND RESINS	57.87		90.65	
	METAL-CONTAINING SLUDGES	176.70		276.79	
	METAL-CONTAINING LIQUIDS	49.76		77.95	
	NON-METALLIC INORGANIC LIQUIDS	75.29		117.94	
	SOIL	9.27		0.00	
	MISCELLANEOUS WASTES	91.25		142.94	
	Total:		773.16	Total:	1196.60
36	WASTE OIL	4.58		12.85	
	HALOGENATED SOLVENTS	5.36		15.04	
	NON-HALOGENATED SOLVENTS	21.34		59.89	
	ORGANIC LIQUIDS	10.76		30.20	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	6.86		19.25	
	DYE & PAINT SLUDGES AND RESINS	21.68		60.84	
	METAL-CONTAINING SLUDGES	240.98		676.29	
	METAL-CONTAINING LIQUIDS	53.60		150.42	
	NON-METALLIC INORGANIC LIQUIDS	3.45		9.68	
	MISCELLANEOUS WASTES	6.18		0.00	
	Total:		374.79	Total:	1034.46
37	NON-HALOGENATED SOLVENTS	1.11		2.92	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	9.89		26.02	
	DYE & PAINT SLUDGES AND RESINS	0.76		2.00	
	MISCELLANEOUS WASTES	1.58		4.15	
	Total:		13.34	Total:	35.09
38	WASTE OIL	0.20		0.50	
	HALOGENATED SOLVENTS	2.60		6.49	
	NON-HALOGENATED SOLVENTS	2.47		6.17	
	DYE & PAINT SLUDGES AND RESINS	5.25		13.09	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	MISCELLANEOUS WASTES	3.81		9.50	
	Total:		14.33	Total:	35.75
40	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	43.34		96.00	
	NON-METALLIC INORGANIC LIQUIDS	19.99		44.28	
	Total:		63.33	Total:	140.28
41	SOIL	0.80		0.00	
	Total:		0.80	Total:	0.00
42	WASTE OIL	31.37		46.78	
	NON-HALOGENATED SOLVENTS	2.29		3.42	
	ORGANIC LIQUIDS	4.58		6.83	
	OILY SLUDGES	0.15		0.22	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	182.41		272.03	
	METAL-CONTAINING LIQUIDS	17.95		26.77	
	Total:		238.75	Total:	356.05
44	SOIL	10.84		0.00	
	Total:		10.84	Total:	0.00
46	OILY SLUDGES	44.78		99.19	
	Total:		44.78	Total:	99.19
48	ORGANIC LIQUIDS	16.07		29.23	
	METAL-CONTAINING LIQUIDS	4.17		7.58	
	MISCELLANEOUS WASTES	9.26		0.00	
	Total:		29.50	Total:	36.81
49	WASTE OIL	4725.54		10598.70	
	HALOGENATED SOLVENTS	5.93		13.30	
	NON-HALOGENATED SOLVENTS	10.28		23.06	
	ORGANIC LIQUIDS	170.97		383.46	
	DIOXINS	132.46		297.09	
	OILY SLUDGES	234.00		524.83	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	138.61		310.89	
	DYE & PAINT SLUDGES AND RESINS	0.50		1.12	
	METAL-CONTAINING LIQUIDS	124.17		278.50	
	NON-METALLIC INORGANIC LIQUIDS	200.02		448.62	
	NON-METALLIC INORGANIC SLUDGES	33.49		75.12	
	SOIL	551.53		0.00	
	MISCELLANEOUS WASTES	17127.18		38377.05	
	Total:		23454.68	Total:	51331.74
51	NON-HALOGENATED SOLVENTS	0.88		1.33	
	ORGANIC LIQUIDS	48.20		72.73	
	SOIL	1.68		0.00	
	Total:		50.76	Total:	74.06
54	WASTE OIL	2.52		4.01	
	NON-HALOGENATED SOLVENTS	0.45		0.72	
	OILY SLUDGES	5.83		9.28	
	MISCELLANEOUS WASTES	108.57		172.83	
	Total:		117.37	Total:	186.84
55	NON-HALOGENATED SOLVENTS	12.25		19.50	
	ORGANIC LIQUIDS	34.18		54.41	
	DIOXINS	35.19		56.02	
	METAL-CONTAINING LIQUIDS	607.46		966.99	
	SOIL	12.64		0.00	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	MISCELLANEOUS WASTES	1546.55		2461.88	
	Total:		2248.27	Total:	3558.80
60	NON-HALOGENATED SOLVENTS	27.97		53.72	
	Total:		27.97	Total:	53.72
65	NON-METALLIC INORGANIC LIQUIDS	5.14		9.87	
	Total:		5.14	Total:	9.87
72	HALOGENATED SOLVENTS	0.46		0.63	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	11.63		15.98	
	Total:		12.09	Total:	16.61
73	HALOGENATED SOLVENTS	0.12		0.36	
	PESTICIDES	0.21		0.63	
	DIOXINS	6.86		20.54	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.42		1.26	
	METAL-CONTAINING LIQUIDS	18.00		53.90	
	SOIL	2.94		0.00	
	MISCELLANEOUS WASTES	4.58		13.71	
	Total:		33.13	Total:	90.40
75	WASTE OIL	0.88		1.21	
	NON-HALOGENATED SOLVENTS	74.47		102.34	
	ORGANIC LIQUIDS	4.17		5.73	
	OILY SLUDGES	2.08		2.86	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	19.59		26.92	
	DYE & PAINT SLUDGES AND RESINS	0.44		0.60	
	MISCELLANEOUS WASTES	1.36		1.87	
	Total:		102.99	Total:	141.53
76	HALOGENATED SOLVENTS	0.91		1.25	
	NON-HALOGENATED SOLVENTS	1.14		1.57	
	ORGANIC LIQUIDS	31.27		42.97	
	NON-METALLIC INORGANIC LIQUIDS	1164.61		1600.53	
	Total:		1197.93	Total:	1646.32
78	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.08		0.16	
	Total:		0.08	Total:	0.16
80	WASTE OIL	4.16		6.61	
	NON-HALOGENATED SOLVENTS	1.24		1.97	
	DYE & PAINT SLUDGES AND RESINS	0.83		1.32	
	MISCELLANEOUS WASTES	1.33		2.11	
	Total:		7.56	Total:	12.01
82	NON-HALOGENATED SOLVENTS	1.04		1.65	
	ORGANIC LIQUIDS	6.88		10.90	
	PESTICIDES	0.45		0.71	
	OILY SLUDGES	4.17		6.61	
	MISCELLANEOUS WASTES	11.29		0.00	
	Total:		23.83	Total:	19.87
87	WASTE OIL	112.48		0.00	
	NON-HALOGENATED SOLVENTS	2.60		0.00	
	ORGANIC LIQUIDS	55.33		0.00	
	OILY SLUDGES	5.03		0.00	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	300.84		0.00	
	NON-METALLIC INORGANIC LIQUIDS	20.85		0.00	
	NON-METALLIC INORGANIC SLUDGES	8.75		0.00	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	SOIL	172.70		0.00	
	MISCELLANEOUS WASTES	11.91		10.09	
	Total:		690.49	Total:	10.09
91	WASTE OIL	2.67		3.04	
	HALOGENATED SOLVENTS	1.36		1.55	
	NON-HALOGENATED SOLVENTS	11.42		12.99	
	NON-METALLIC INORGANIC LIQUIDS	0.00		0.00	
	MISCELLANEOUS WASTES	2.32		0.00	
	Total:		17.77	Total:	17.58
92	SOIL	0.42		0.00	
	MISCELLANEOUS WASTES	0.00		0.00	
	Total:		0.42	Total:	0.00
94	NON-HALOGENATED SOLVENTS	0.60		0.68	
	METAL-CONTAINING LIQUIDS	0.00		0.00	
	NON-METALLIC INORGANIC LIQUIDS	0.78		0.89	
	MISCELLANEOUS WASTES	2.54		0.00	
	Total:		3.92	Total:	1.57
95	WASTE OIL	11.88		13.51	
	HALOGENATED SOLVENTS	1.32		1.50	
	NON-HALOGENATED SOLVENTS	52.39		59.59	
	ORGANIC LIQUIDS	3.58		4.07	
	DIOXINS	1.29		1.47	
	OILY SLUDGES	1.78		2.02	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.90		2.16	
	DYE & PAINT SLUDGES AND RESINS	25.41		28.90	
	NON-METALLIC INORGANIC LIQUIDS	12.19		13.87	
	NON-METALLIC INORGANIC SLUDGES	4.05		4.61	
	SOIL	1.32		0.00	
	MISCELLANEOUS WASTES	129.66		0.00	
	Total:		246.77	Total:	131.70
97	WASTE OIL	36.00		40.94	
	HALOGENATED SOLVENTS	0.18		0.20	
	NON-HALOGENATED SOLVENTS	8.99		10.23	
	DIOXINS	3.55		4.04	
	OILY SLUDGES	8.50		9.67	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	3.12		3.55	
	DYE & PAINT SLUDGES AND RESINS	1.14		1.30	
	METAL-CONTAINING LIQUIDS	262.46		298.53	
	NON-METALLIC INORGANIC LIQUIDS	0.45		0.51	
	SOIL	42.10		0.00	
	MISCELLANEOUS WASTES	151.91		0.00	
	Total:		518.40	Total:	368.97
99	WASTE OIL	5.27		5.27	
	OILY SLUDGES	67.27		67.27	
	Total:		72.54	Total:	72.54

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN CONTRA
COSTA COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	73	65	44
Agriculture & Mining	0	0	0
Construction	191	172	115
Manufacturing	104,228	93,806	62,537
Transport, Communication, Utilities	47,821	43,039	28,693
Wholesale Trade	150	135	90
Retail Trade	3,618	3,256	2,171
Finance, Insurance, & Real Estate	64	57	38
Services	1,930	1,737	1,158
Government	814	733	488
TOTALS	158,889	143,000	95,333

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN CONTRA
COSTA COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	30,192	27,173	18,115
Halogenated Solvents	629	566	377
Non-halogenated Solvents	2,482	2,234	1,489
Organic Liquids	3,816	3,435	2,290
Pesticides	1,134	1,021	680
Dioxins	554	498	332
Oily Sludges	12,671	11,404	7,602
Halogenated Organic Sludges & Solids	3,937	3,543	2,362
Non-halogenated Organic Sludges&Solids	11,147	10,032	6,688
Dye & Paint Sludges & Resins	365	328	219
Metal-Containing Sludges	953	858	572
Metal-Containing Liquids	15,451	13,906	9,271
Cyanide & Metal Liquids	0	0	0
Non-metallic Inorganic Liquids	8,683	7,814	5,210
Non-metallic Inorganic Sludges	96	86	57
Contaminated Soil	0	0	0
Miscellaneous Wastes	66,779	60,101	40,068
TOTALS	158,889	143,000	95,333

9/1/88

COUNTY: MARIN

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	49	0.75		0.85	
	59	15.25		24.09	
	99	0.22		0.22	
		Total:	16.22	Total:	25.16
112	36	0.70		0.90	
		Total:	0.70	Total:	0.90
113	49	0.30		0.34	
		Total:	0.30	Total:	0.34
123	49	0.02		0.02	
		Total:	0.02	Total:	0.02
134	75	8.21		10.87	
		Total:	8.21	Total:	10.87
151	41	0.30		0.00	
	80	6.74		0.00	
	82	4.65		0.00	
	92	2.52		0.00	
	97	16.85		0.00	
		Total:	31.06	Total:	0.00
181	48	0.07		0.09	
	49	0.07		0.08	
		Total:	0.14	Total:	0.17
211	36	0.45		0.58	
	38	7.75		34.18	
	49	0.22		0.25	
	59	2.29		3.62	
	72	0.45		0.60	
		Total:	11.16	Total:	39.23
212	38	3.18		14.02	
	49	0.41		0.47	
	59	0.22		0.35	
	75	4.42		5.85	
	80	0.22		0.32	
		Total:	8.45	Total:	21.01
213	27	0.45		0.85	
	39	2.31		10.19	
	49	0.22		0.25	
	59	5.02		7.93	
	78	20.85		34.36	
	80	0.22		0.32	
		Total:	29.07	Total:	53.90

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
214	39	0.45		1.98	
	49	2.17		2.46	
	55	5.01		7.92	
	59	20.79		32.85	
	75	35.72		47.29	
	78	3.89		6.41	
	80	0.66		0.95	
	99	1.35		1.35	
		Total:	70.04	Total:	101.21
221	36	0.80		1.03	
	38	0.66		2.91	
	49	8.62		9.78	
		Total:	10.08	Total:	13.72
222	41	10.42		17.39	
	55	7.92		12.51	
	75	25.67		33.98	
		Total:	44.01	Total:	63.88
223	49	24.53		27.84	
	59	3.22		5.09	
		Total:	27.75	Total:	32.93
232	82	0.15		0.20	
		Total:	0.15	Total:	0.20
241	97	478.16		724.34	
		Total:	478.16	Total:	724.34
261	49	2.19		2.49	
	97	2.00		3.03	
		Total:	4.19	Total:	5.52
272	99	23.40		23.40	
		Total:	23.40	Total:	23.40
311	80	0.40		0.58	
		Total:	0.40	Total:	0.58
331	30	4.21		6.10	
		Total:	4.21	Total:	6.10
342	55	1.97		3.11	
		Total:	1.97	Total:	3.11
343	48	0.06		0.07	
	49	0.20		0.23	
		Total:	0.26	Total:	0.30

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
351	78	0.01		0.02	
		Total:	0.01	Total:	0.02
352	49	0.22		0.25	
	59	37.07		58.57	
	78	0.57		0.94	
	94	0.49		0.74	
		Total:	38.35	Total:	60.50
461	30	6.74		9.76	
	44	9.26		15.45	
	75	0.42		0.56	
	78	2.52		4.15	
		Total:	18.94	Total:	29.92
512	49	52.55		59.64	
	97	1.05		1.59	
		Total:	53.60	Total:	61.23
513	49	0.59		0.67	
	59	232.53		367.37	
		Total:	233.12	Total:	368.04
541	73	58.75		169.88	
	78	0.01		0.02	
		Total:	58.76	Total:	169.90
551	36	0.34		0.44	
	80	0.70		1.01	
	95	0.22		0.33	
		Total:	1.26	Total:	1.78
611	49	1650.41		0.00	
	55	15.17		0.00	
	59	1.04		0.00	
	97	10985.35		0.00	
		Total:	12651.97	Total:	0.00
711	59	2.24		3.54	
		Total:	2.24	Total:	3.54
			-----		-----
		Total:	13828.20	Total:	1821.82

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	10.08		13.72	
	223	27.75		32.93	
		Total:	37.83	Total:	46.65
HALOGENATED SOLVENTS	211	11.16		39.23	
		Total:	11.16	Total:	39.23
NON-HALOGENATED SOLVENTS	212	8.45		21.01	
	213	29.07		53.90	
	214	70.04		101.21	
		Total:	107.56	Total:	176.12
ORGANIC LIQUIDS	134	8.21		10.87	
	342	1.97		3.11	
	343	0.26		0.30	
		Total:	10.44	Total:	14.28
PESTICIDES	232	0.15		0.20	
		Total:	0.15	Total:	0.20
DIOXINS	261	4.19		5.52	
		Total:	4.19	Total:	5.52
OILY SLUDGES	222	44.01		63.88	
	352	38.35		60.50	
		Total:	82.36	Total:	124.38
HALOGENATED ORGANIC SLUDGES & SOLIDS	351	0.01		0.02	
		Total:	0.01	Total:	0.02
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	478.16		724.34	
		Total:	478.16	Total:	724.34
DYE & PAINT SLUDGES AND RESINS	272	23.40		23.40	
	461	18.94		29.92	
		Total:	42.34	Total:	53.32
METAL-CONTAINING LIQUIDS	111	16.22		25.16	
		Total:	16.22	Total:	25.16
CYANIDE & METAL LIQUIDS	711	2.24		3.54	
		Total:	2.24	Total:	3.54
NON-METALLIC INORGANIC LIQUIDS	112	0.70		0.90	
	113	0.30		0.34	
	123	0.02		0.02	
		Total:	1.02	Total:	1.26
SOIL	611	12651.97		0.00	
		Total:	12651.97	Total:	0.00
MISCELLANEOUS WASTES	151	31.06		0.00	

181	0.14		0.17	
311	0.40		0.58	
331	4.21		6.10	
512	53.60		61.23	
513	233.12		368.04	
541	58.76		169.90	
551	1.26		1.78	
	Total:	382.55	Total:	607.80

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
27	213	0.45		0.85	
		Total:	0.45	Total:	0.85
30	331	4.21		6.10	
	461	6.74		9.76	
		Total:	10.95	Total:	15.86
36	112	0.70		0.90	
	211	0.45		0.58	
	221	0.80		1.03	
	551	0.34		0.44	
		Total:	2.29	Total:	2.95
38	211	7.75		34.18	
	212	3.18		14.02	
	221	0.66		2.91	
		Total:	11.59	Total:	51.11
39	213	2.31		10.19	
	214	0.45		1.98	
		Total:	2.76	Total:	12.17
41	151	0.30		0.00	
	222	10.42		17.39	
		Total:	10.72	Total:	17.39
44	461	9.26		15.45	
		Total:	9.26	Total:	15.45
48	181	0.07		0.09	
	343	0.06		0.07	
		Total:	0.13	Total:	0.16
49	111	0.75		0.85	
	113	0.30		0.34	
	123	0.02		0.02	
	181	0.07		0.08	
	211	0.22		0.25	
	212	0.41		0.47	
	213	0.22		0.25	
	214	2.17		2.46	
	221	8.62		9.78	
	223	24.53		27.84	
	261	2.19		2.49	
	343	0.20		0.23	
	352	0.22		0.25	
	512	52.55		59.64	
	513	0.59		0.67	
	611	1650.41		0.00	
		Total:	1743.47	Total:	105.62
55	214	5.01		7.92	
	222	7.92		12.51	
	342	1.97		3.11	
	611	15.17		0.00	
		Total:	30.07	Total:	23.54
59	111	15.25		24.09	
	211	2.29		3.62	
	212	0.22		0.35	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	213	5.02		7.93	
	214	20.79		32.85	
	223	3.22		5.09	
	352	37.07		58.57	
	513	232.53		367.37	
	611	1.04		0.00	
	711	2.24		3.54	
	Total:		319.67	Total:	503.41
72	211	0.45		0.60	
	Total:		0.45	Total:	0.60
73	541	58.75		169.88	
	Total:		58.75	Total:	169.88
75	134	8.21		10.87	
	212	4.42		5.85	
	214	35.72		47.29	
	222	25.67		33.98	
	461	0.42		0.56	
	Total:		74.44	Total:	98.55
78	213	20.85		34.36	
	214	3.89		6.41	
	351	0.01		0.02	
	352	0.57		0.94	
	461	2.52		4.15	
	541	0.01		0.02	
	Total:		27.85	Total:	45.90
80	151	6.74		0.00	
	212	0.22		0.32	
	213	0.22		0.32	
	214	0.66		0.95	
	311	0.40		0.58	
	551	0.70		1.01	
	Total:		8.94	Total:	3.18
82	151	4.65		0.00	
	232	0.15		0.20	
	Total:		4.80	Total:	0.20
92	151	2.52		0.00	
	Total:		2.52	Total:	0.00
94	352	0.49		0.74	
	Total:		0.49	Total:	0.74
95	551	0.22		0.33	
	Total:		0.22	Total:	0.33
97	151	16.85		0.00	
	241	478.16		724.34	
	261	2.00		3.03	
	512	1.05		1.59	
	611	10985.35		0.00	
	Total:		11483.41	Total:	728.96
99	111	0.22		0.22	
	214	1.35		1.35	
	272	23.40		23.40	
	Total:		24.97	Total:	24.97

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	111	0.22		0.22	
	214	1.35		1.35	
	272	23.40		23.40	
		Total:	24.97	Total:	24.97
Manufacturing	112	0.70		0.90	
	211	8.20		34.76	
	212	3.18		14.02	
	213	2.76		11.04	
	214	0.45		1.98	
	221	1.46		3.94	
	331	4.21		6.10	
	461	6.74		9.76	
	551	0.34		0.44	
		Total:	28.04	Total:	82.94
Transportation, Communication, Utilities	111	0.75		0.85	
	113	0.30		0.34	
	123	0.02		0.02	
	151	0.30		0.00	
	181	0.14		0.17	
	211	0.22		0.25	
	212	0.41		0.47	
	213	0.22		0.25	
	214	2.17		2.46	
	221	8.62		9.78	
	222	10.42		17.39	
	223	24.53		27.84	
	261	2.19		2.49	
	343	0.26		0.30	
	352	0.22		0.25	
	461	9.26		15.45	
	512	52.55		59.64	
	513	0.59		0.67	
	611	1650.41		0.00	
		Total:	1763.58	Total:	138.62
Retail Trade	111	15.25		24.09	
	211	2.29		3.62	
	212	0.22		0.35	
	213	5.02		7.93	
	214	25.80		40.77	
	222	7.92		12.51	
	223	3.22		5.09	
	342	1.97		3.11	
	352	37.07		58.57	
	513	232.53		367.37	
	611	16.21		0.00	
	711	2.24		3.54	
		Total:	349.74	Total:	526.95
Services	134	8.21		10.87	

151	11.39		0.00
211	0.45		0.60
212	4.64		6.17
213	21.07		34.68
214	40.27		54.65
222	25.67		33.98
232	0.15		0.20
311	0.40		0.58
351	0.01		0.02
352	0.57		0.94
461	2.94		4.71
541	58.76		169.90
551	0.70		1.01
Total:		175.23	Total: 318.31

Government

151	19.37		0.00
241	478.16		724.34
261	2.00		3.03
352	0.49		0.74
512	1.05		1.59
551	0.22		0.33
611	10985.35		0.00
Total:		11486.64	Total: 730.03

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
27	NON-HALOGENATED SOLVENTS	0.45		0.85	
	Total:		0.45	Total:	0.85
30	DYE & PAINT SLUDGES AND RESINS	6.74		9.76	
	MISCELLANEOUS WASTES	4.21		6.10	
	Total:		10.95	Total:	15.86
36	WASTE OIL	0.80		1.03	
	HALOGENATED SOLVENTS	0.45		0.58	
	NON-METALLIC INORGANIC LIQUIDS	0.70		0.90	
	MISCELLANEOUS WASTES	0.34		0.44	
	Total:		2.29	Total:	2.95
38	WASTE OIL	0.66		2.91	
	HALOGENATED SOLVENTS	7.75		34.18	
	NON-HALOGENATED SOLVENTS	5.94		26.19	
	Total:		14.35	Total:	63.28
41	OILY SLUDGES	10.42		17.39	
	MISCELLANEOUS WASTES	0.30		0.00	
	Total:		10.72	Total:	17.39
44	DYE & PAINT SLUDGES AND RESINS	9.26		15.45	
	Total:		9.26	Total:	15.45
48	ORGANIC LIQUIDS	0.06		0.07	
	MISCELLANEOUS WASTES	0.07		0.09	
	Total:		0.13	Total:	0.16
49	WASTE OIL	33.15		37.62	
	HALOGENATED SOLVENTS	0.22		0.25	
	NON-HALOGENATED SOLVENTS	2.80		3.18	
	ORGANIC LIQUIDS	0.20		0.23	
	DIOXINS	2.19		2.49	
	OILY SLUDGES	0.22		0.25	
	METAL-CONTAINING LIQUIDS	0.75		0.85	
	NON-METALLIC INORGANIC LIQUIDS	0.32		0.36	
	SOIL	1650.41		0.00	
	MISCELLANEOUS WASTES	53.21		60.39	
	Total:		1743.47	Total:	105.62
55	NON-HALOGENATED SOLVENTS	5.01		7.92	
	ORGANIC LIQUIDS	1.97		3.11	
	OILY SLUDGES	7.92		12.51	
	SOIL	15.17		0.00	
	Total:		30.07	Total:	23.54
59	WASTE OIL	3.22		5.09	
	HALOGENATED SOLVENTS	2.29		3.62	
	NON-HALOGENATED SOLVENTS	26.03		41.13	
	OILY SLUDGES	37.07		58.57	
	METAL-CONTAINING LIQUIDS	15.25		24.09	
	CYANIDE & METAL LIQUIDS	2.24		3.54	
	SOIL	1.04		0.00	
	MISCELLANEOUS WASTES	232.53		367.37	
	Total:		319.67	Total:	503.41
72	HALOGENATED SOLVENTS	0.45		0.60	
	Total:		0.45	Total:	0.60
73	MISCELLANEOUS WASTES	58.75		169.88	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	58.75	Total:	169.88
75	NON-HALOGENATED SOLVENTS	40.14		53.14	
	ORGANIC LIQUIDS	8.21		10.87	
	OILY SLUDGES	25.67		33.98	
	DYE & PAINT SLUDGES AND RESINS	0.42		0.56	
		Total:	74.44	Total:	98.55
78	NON-HALOGENATED SOLVENTS	24.74		40.77	
	OILY SLUDGES	0.57		0.94	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.01		0.02	
	DYE & PAINT SLUDGES AND RESINS	2.52		4.15	
	MISCELLANEOUS WASTES	0.01		0.02	
		Total:	27.85	Total:	45.90
80	NON-HALOGENATED SOLVENTS	1.10		1.59	
	MISCELLANEOUS WASTES	7.84		0.00	
		Total:	8.94	Total:	1.59
82	PESTICIDES	0.15		0.20	
	MISCELLANEOUS WASTES	7.17		0.00	
		Total:	7.32	Total:	0.20
94	OILY SLUDGES	0.49		0.74	
		Total:	0.49	Total:	0.74
95	MISCELLANEOUS WASTES	0.22		0.33	
		Total:	0.22	Total:	0.33
97	DIOXINS	2.00		3.03	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	478.16		724.34	
	SOIL	10985.35		0.00	
	MISCELLANEOUS WASTES	17.90		0.00	
		Total:	11483.41	Total:	727.37
99	NON-HALOGENATED SOLVENTS	1.35		1.35	
	DYE & PAINT SLUDGES AND RESINS	23.40		23.40	
	METAL-CONTAINING LIQUIDS	0.22		0.22	
		Total:	24.97	Total:	24.97

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN
MARIN COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	25	22	15
Agriculture & Mining	0	0	0
Construction	0	0	0
Manufacturing	83	75	50
Transport, Communication, Utilities	139	125	83
Wholesale Trade	0	0	0
Retail Trade	527	474	316
Finance, Insurance, & Real Estate	0	0	0
Services	318	286	191
Government	730	657	438
TOTALS	1,822	1,640	1,093

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN MARIN
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	47	42	28
Halogenated Solvents	39	35	24
Non-halogenated Solvents	176	159	106
Organic Liquids	14	13	9
Pesticides	*	*	*
Dioxins	6	5	3
Oily Sludges	124	112	75
Halogenated Organic Sludges & Solids	*	*	*
Non-halogenated Organic Sludges&Solids	724	652	435
Dye & Paint Sludges & Resins	53	48	32
Metal-Containing Sludges	0	0	0
Metal-Containing Liquids	25	23	15
Cyanide & Metal Liquids	4	3	2
Non-metallic Inorganic Liquids	1	1	1
Non-metallic Inorganic Sludges	0	0	0
Contaminated Soil	0	0	0
Miscellaneous Wastes	608	547	365
TOTALS	1,822	1,640	1,093

* = less than one ton, but greater than zero

9/1/88

COUNTY: NAPA

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
113	31	0.22		0.24	
		Total:	0.22	Total:	0.24
121	94	0.06		0.07	
		Total:	0.06	Total:	0.07
132	94	0.04		0.04	
		Total:	0.04	Total:	0.04
151	94	40.41		0.00	
		Total:	40.41	Total:	0.00
171	31	353.85		384.43	
		Total:	353.85	Total:	384.43
181	49	0.13		0.15	
	94	0.05		0.06	
		Total:	0.18	Total:	0.21
211	38	4.40		39.55	
		Total:	4.40	Total:	39.55
212	31	6.67		7.25	
	76	0.22		0.26	
		Total:	6.89	Total:	7.51
213	28	0.22		0.26	
	49	0.05		0.06	
		Total:	0.27	Total:	0.32
214	34	0.45		0.52	
	49	0.99		1.17	
	55	1.00		1.55	
	75	2.15		2.58	
	99	1.42		1.42	
		Total:	6.01	Total:	7.24
221	20	0.20		0.39	
	28	356.07		419.39	
	49	4.06		4.79	
		Total:	360.33	Total:	424.57
223	28	0.33		0.39	
	31	5.21		5.66	
	49	0.51		0.60	
		Total:	6.05	Total:	6.65
261	80	9.81		15.44	
		Total:	9.81	Total:	15.44

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
272	28	3.83		4.51	
		Total:	3.83	Total:	4.51
291	94	0.27		0.30	
		Total:	0.27	Total:	0.30
331	31	1.36		1.48	
		Total:	1.36	Total:	1.48
342	94	0.02		0.02	
		Total:	0.02	Total:	0.02
343	31	0.22		0.24	
	49	0.17		0.20	
		Total:	0.39	Total:	0.44
352	28	3.80		4.48	
	31	96.12		104.43	
	94	0.22		0.24	
		Total:	100.14	Total:	109.15
461	31	2.36		2.56	
	34	2.05		2.37	
		Total:	4.41	Total:	4.93
491	31	15.10		16.40	
	34	4.00		4.62	
		Total:	19.10	Total:	21.02
513	49	0.20		0.24	
		Total:	0.20	Total:	0.24
551	28	0.15		0.18	
		Total:	0.15	Total:	0.18
811	31	120.50		0.00	
		Total:	120.50	Total:	0.00
731	49	0.27		0.32	
		Total:	0.27	Total:	0.32
			-----		-----
		Total:	1039.16	Total:	1028.86

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	360.33		424.57	
	223	6.05		6.65	
		Total:	366.38	Total:	431.22
HALOGENATED SOLVENTS	211	4.40		39.55	
		Total:	4.40	Total:	39.55
NON-HALOGENATED SOLVENTS	212	6.89		7.51	
	213	0.27		0.32	
	214	6.01		7.24	
		Total:	13.17	Total:	15.07
ORGANIC LIQUIDS	342	0.02		0.02	
	343	0.39		0.44	
		Total:	0.41	Total:	0.46
DIOXINS	261	9.81		15.44	
	731	0.27		0.32	
		Total:	10.08	Total:	15.76
OILY SLUDGES	352	100.14		109.15	
		Total:	100.14	Total:	109.15
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	491	19.10		21.02	
		Total:	19.10	Total:	21.02
DYE & PAINT SLUDGES AND RESINS	272	3.83		4.51	
	291	0.27		0.30	
	461	4.41		4.93	
		Total:	8.51	Total:	9.74
METAL-CONTAINING SLUDGES	171	353.85		384.43	
		Total:	353.85	Total:	384.43
METAL-CONTAINING LIQUIDS	121	0.06		0.07	
	132	0.04		0.04	
		Total:	0.10	Total:	0.11
NON-METALLIC INORGANIC LIQUIDS	113	0.22		0.24	
		Total:	0.22	Total:	0.24
SOIL	611	120.50		0.00	
		Total:	120.50	Total:	0.00
MISCELLANEOUS WASTES	151	40.41		0.00	
	181	0.18		0.21	
	331	1.36		1.48	
	513	0.20		0.24	
	551	0.15		0.18	
		Total:	42.30	Total:	2.11

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
20	221	0.20		0.39	
		Total:	0.20	Total:	0.39
28	213	0.22		0.26	
	221	356.07		419.39	
	223	0.33		0.39	
	272	3.83		4.51	
	352	3.80		4.48	
	551	0.15		0.18	
		Total:	364.40	Total:	429.21
31	113	0.22		0.24	
	171	353.85		384.43	
	212	6.67		7.25	
	223	5.21		5.66	
	331	1.36		1.48	
	343	0.22		0.24	
	352	96.12		104.43	
	461	2.36		2.56	
	491	15.10		16.40	
	611	120.50		0.00	
		Total:	601.61	Total:	522.69
34	214	0.45		0.52	
	461	2.05		2.37	
	491	4.00		4.62	
		Total:	6.50	Total:	7.51
38	211	4.40		39.55	
		Total:	4.40	Total:	39.55
49	181	0.13		0.15	
	213	0.05		0.06	
	214	0.99		1.17	
	221	4.06		4.79	
	223	0.51		0.60	
	343	0.17		0.20	
	513	0.20		0.24	
	731	0.27		0.32	
		Total:	6.38	Total:	7.53
55	214	3.15		4.13	
		Total:	3.15	Total:	4.13
76	212	0.22		0.26	
		Total:	0.22	Total:	0.26
80	261	9.81		15.44	
		Total:	9.81	Total:	15.44
94	121	0.06		0.07	
	132	0.04		0.04	
	151	40.41		0.00	
	181	0.05		0.06	
	291	0.27		0.30	
	342	0.02		0.02	
	352	0.22		0.24	
		Total:	41.07	Total:	0.73
99	214	1.42		1.42	
		Total:	1.42	Total:	1.42

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	214	1.42		1.42	
		Total:	1.42	Total:	1.42
Manufacturing	113	0.22		0.24	
	171	353.85		384.43	
	211	4.40		39.55	
	212	6.67		7.25	
	213	0.22		0.26	
	214	0.45		0.52	
	221	356.27		419.78	
	223	5.54		6.05	
	272	3.83		4.51	
	331	1.36		1.48	
	343	0.22		0.24	
	352	99.92		108.91	
	461	4.41		4.93	
	491	19.10		21.02	
	551	0.15		0.18	
	611	120.50		0.00	
		Total:	977.11	Total:	999.35
Transportation, Communication, Utilities	181	0.13		0.15	
	213	0.05		0.06	
	214	0.99		1.17	
	221	4.06		4.79	
	223	0.51		0.60	
	343	0.17		0.20	
	513	0.20		0.24	
	731	0.27		0.32	
		Total:	6.38	Total:	7.53
Retail Trade	214	1.00		1.55	
		Total:	1.00	Total:	1.55
Services	212	0.22		0.26	
	214	2.15		2.58	
	261	9.81		15.44	
		Total:	12.18	Total:	18.28
Government	121	0.06		0.07	
	132	0.04		0.04	
	151	40.41		0.00	
	181	0.05		0.06	
	291	0.27		0.30	
	342	0.02		0.02	
	352	0.22		0.24	
		Total:	41.07	Total:	0.73

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
20	WASTE OIL	356.60		420.17	
	Total:		356.60	Total:	420.17
28	NON-HALOGENATED SOLVENTS	0.22		0.26	
	OILY SLUDGES	3.80		4.48	
	DYE & PAINT SLUDGES AND RESINS	3.83		4.51	
	MISCELLANEOUS WASTES	0.15		0.18	
	Total:		8.00	Total:	9.43
31	WASTE OIL	5.21		5.66	
	NON-HALOGENATED SOLVENTS	6.67		7.25	
	ORGANIC LIQUIDS	0.22		0.24	
	OILY SLUDGES	96.12		104.43	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	15.10		16.40	
	DYE & PAINT SLUDGES AND RESINS	2.36		2.56	
	METAL-CONTAINING SLUDGES	353.85		384.43	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.24	
	SOIL	120.50		0.00	
	MISCELLANEOUS WASTES	1.36		1.48	
	Total:		601.61	Total:	522.69
34	NON-HALOGENATED SOLVENTS	0.45		0.52	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	4.00		4.62	
	DYE & PAINT SLUDGES AND RESINS	2.05		2.37	
	Total:		6.50	Total:	7.51
38	HALOGENATED SOLVENTS	4.40		39.55	
	Total:		4.40	Total:	39.55
49	WASTE OIL	4.57		5.39	
	NON-HALOGENATED SOLVENTS	1.04		1.23	
	ORGANIC LIQUIDS	0.17		0.20	
	DIOXINS	0.27		0.32	
	MISCELLANEOUS WASTES	0.33		0.39	
	Total:		6.38	Total:	7.53
55	NON-HALOGENATED SOLVENTS	3.37		4.39	
	Total:		3.37	Total:	4.39
80	DIOXINS	9.81		15.44	
	Total:		9.81	Total:	15.44
94	ORGANIC LIQUIDS	0.02		0.02	
	OILY SLUDGES	0.22		0.24	
	DYE & PAINT SLUDGES AND RESINS	0.27		0.30	
	METAL-CONTAINING LIQUIDS	0.10		0.11	
	MISCELLANEOUS WASTES	40.46		0.00	
	Total:		41.07	Total:	0.67
99	NON-HALOGENATED SOLVENTS	1.42		1.42	
	Total:		1.42	Total:	1.42

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN NAPA
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	1	1	1
Agriculture & Mining	0	0	0
Construction	0	0	0
Manufacturing	999	899	600
Transport, Communication, Utilities	8	7	5
Wholesale Trade	0	0	0
Retail Trade	2	1	1
Finance, Insurance, & Real Estate	0	0	0
Services	18	16	11
Government	1	1	*
TOTALS	1,029	926	617

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN NAPA COUNTY
FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	431	388	259
Halogenated Solvents	40	36	24
Non-halogenated Solvents	15	14	9
Organic Liquids	*	*	*
Pesticides	0	0	0
Dioxins	16	14	9
Oily Sludges	109	98	65
Halogenated Organic Sludges & Solids	0	0	0
Non-halogenated Organic Sludges&Solids	21	19	13
Dye & Paint Sludges & Resins	10	9	6
Metal-Containing Sludges	384	346	231
Metal-Containing Liquids	*	*	*
Cyanide & Metal Liquids	0	0	0
Non-metallic Inorganic Liquids	*	*	*
Non-metallic Inorganic Sludges	0	0	0
Contaminated Soil	0	0	0
Miscellaneous Wastes	2	2	1
TOTALS	1,029	926	617

* = less than one ton, but greater than zero

9/1/88

COUNTY: SANFRANCISCO

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	10	5.01		1.98	
	36	56.28		141.81	
	44	0.22		0.34	
	48	25.51		39.33	
	60	40.45		57.42	
	76	2.05		2.67	
	95	0.22		0.24	
	96	0.07		0.08	
	97	30.57		33.49	
		Total:	160.38	Total:	277.36
112	20	0.12		0.14	
	22	0.35		0.47	
	73	0.10		0.16	
		Total:	0.57	Total:	0.77
113	22	0.92		1.22	
		Total:	0.92	Total:	1.22
121	48	0.42		0.65	
	49	0.04		0.05	
		Total:	0.46	Total:	0.70
122	20	0.57		0.65	
	40	0.25		0.39	
	76	0.22		0.29	
	82	0.20		0.29	
	97	206.39		226.12	
		Total:	207.63	Total:	227.74
123	20	2.29		2.62	
	49	42.29		55.35	
	96	358.55		392.82	
	97	0.45		0.49	
		Total:	403.58	Total:	451.28
131	10	0.22		0.09	
	20	0.22		0.25	
	44	825.45		1273.61	
		Total:	825.89	Total:	1273.95
132	34	3.18		1.83	
	44	6.46		9.97	
	49	112.41		147.13	
	91	0.22		0.24	
	97	0.75		0.82	
		Total:	123.02	Total:	159.99
133	28	1613.60		1811.06	
	44	31.69		48.90	
		Total:	1645.29	Total:	1859.96

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
134	20	14.59		16.71	
	22	0.45		0.60	
	28	9.73		10.92	
	44	306.26		472.54	
	55	10.42		14.05	
	97	232.13		254.32	
		Total:	573.58	Total:	769.14
135	22	1.35		1.79	
	26	0.22		0.24	
	33	13.34		5.91	
	49	4.25		5.56	
	73	0.14		0.23	
	82	0.02		0.03	
	96	19.97		21.88	
		Total:	39.29	Total:	35.64
141	20	0.57		0.65	
	28	2.50		2.81	
	73	0.01		0.02	
	82	0.05		0.07	
		Total:	3.13	Total:	3.55
151	15	39.58		0.00	
	17	112.18		0.00	
	20	160.91		0.00	
	28	0.55		0.00	
	35	1.68		0.00	
	40	3.58		0.00	
	44	19.36		0.00	
	48	165.89		0.00	
	49	221.98		0.00	
	65	145.49		0.00	
	70	493.81		0.00	
	72	0.05		0.00	
	76	0.03		0.00	
	79	0.85		0.00	
	80	23.56		0.00	
	82	443.36		0.00	
	89	9.30		0.00	
	91	60.82		0.00	
	96	1.05		0.00	
	97	53.18		0.00	
	99	47.90		0.00	
		Total:	2005.11	Total:	0.00
161	44	0.20		0.31	
		Total:	0.20	Total:	0.31
171	49	8.48		11.10	
		Total:	8.48	Total:	11.10

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
172	44	0.45		0.69	
	76	36.45		47.47	
		Total:	36.90	Total:	48.16
181	10	11.86		4.68	
	20	0.45		0.52	
	22	0.84		1.12	
	34	132.28		76.05	
	40	0.35		0.54	
	49	40.78		53.38	
	60	552.80		784.77	
	76	0.02		0.03	
	91	0.57		0.62	
	96	16.01		17.54	
	97	15.87		17.39	
		Total:	771.83	Total:	956.64
211	20	0.79		0.90	
	34	0.66		0.38	
	36	2.29		5.77	
	42	1.21		0.95	
	48	1.37		2.11	
	49	0.49		0.64	
	73	0.05		0.08	
	76	0.32		0.42	
	78	0.41		0.56	
	82	0.30		0.43	
	95	0.22		0.24	
		Total:	8.11	Total:	12.48
212	27	8.47		11.53	
	28	1.82		2.04	
	43	0.44		0.48	
	44	1.35		2.08	
	48	0.22		0.34	
	53	3.66		4.93	
	55	1.72		2.32	
	73	0.22		0.36	
	75	6.25		8.14	
	80	0.45		0.59	
	82	1.33		1.91	
		Total:	25.93	Total:	34.72
213	27	0.22		0.30	
	34	0.22		0.13	
	40	0.60		0.93	
	43	1.13		1.24	
	76	1.99		2.59	
	82	0.07		0.10	
	91	0.22		0.24	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	97	2.43		2.66	
		Total:	6.88	Total:	8.19
214	10	0.91		0.36	
	17	1.10		1.43	
	20	0.04		0.05	
	22	0.45		0.60	
	24	0.62		0.68	
	25	0.88		0.96	
	26	3.66		4.00	
	27	73.08		99.50	
	28	213.54		239.67	
	32	0.22		0.21	
	34	4.96		2.85	
	41	3.95		6.09	
	43	7.14		7.82	
	44	1.55		2.39	
	48	1.59		2.45	
	49	3.70		4.84	
	53	35.39		47.72	
	55	15.83		21.34	
	70	0.22		0.35	
	73	0.22		0.36	
	75	40.17		52.31	
	76	14.72		19.17	
	80	0.24		0.32	
	82	1.33		1.91	
	83	1.77		2.54	
	95	0.68		0.74	
	96	17.26		18.91	
	97	2.96		3.24	
		Total:	448.18	Total:	542.81
221	20	10.54		12.07	
	36	0.60		1.51	
	40	25.28		39.01	
	43	0.06		0.07	
	44	149.77		231.08	
	49	107.53		140.74	
	53	1.14		1.54	
	73	1.83		2.98	
	82	53.39		76.63	
	89	12.51		20.38	
	97	129.40		141.77	
		Total:	492.05	Total:	667.78
222	41	77.55		119.65	
	43	2.08		2.28	
	44	218.91		337.76	
	48	1.66		2.56	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	143.57		187.91	
	73	5.45		8.88	
	75	5.00		6.51	
	76	143.82		187.29	
	89	34.80		56.69	
	96	0.84		0.92	
	97	3.25		3.56	
		Total:	636.93	Total:	914.01
223	20	9.13		10.45	
	44	217.64		335.80	
	49	119.86		156.88	
	76	5.00		6.51	
	79	2.40		3.25	
	96	0.41		0.45	
	97	70.35		77.07	
	99	0.34		0.34	
		Total:	425.13	Total:	590.75
232	20	0.22		0.25	
	79	0.10		0.14	
		Total:	0.32	Total:	0.39
241	34	2.60		1.49	
	44	268.34		414.03	
	49	2.30		3.01	
	73	7.22		11.76	
	97	36.16		39.62	
		Total:	316.62	Total:	469.91
261	49	283.38		370.90	
	79	1.60		2.17	
	82	2.75		3.95	
	91	0.02		0.02	
	96	8.13		8.91	
	97	20.39		22.34	
		Total:	316.27	Total:	408.29
272	44	0.22		0.34	
	49	1.07		1.40	
		Total:	1.29	Total:	1.74
281	96	0.25		0.27	
		Total:	0.25	Total:	0.27
291	17	1.20		1.56	
	28	21.26		23.86	
	49	0.40		0.52	
	97	6.60		7.23	
		Total:	29.46	Total:	33.17

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
311	80	2.51		3.31	
		Total:	2.51	Total:	3.31
322	20	6.74		7.72	
	80	1.37		1.81	
		Total:	8.11	Total:	9.53
331	17	2.98		3.86	
	44	0.22		0.34	
	49	1.05		1.37	
	73	0.07		0.11	
	79	9.90		13.43	
	82	0.05		0.07	
		Total:	14.27	Total:	19.18
341	82	0.04		0.06	
		Total:	0.04	Total:	0.06
342	20	10.40		11.91	
		Total:	10.40	Total:	11.91
343	40	0.35		0.54	
	49	4.43		5.80	
	75	15.87		20.67	
	79	10.45		14.17	
		Total:	31.10	Total:	41.18
351	40	0.45		0.69	
		Total:	0.45	Total:	0.69
352	17	0.30		0.39	
	28	350.53		393.43	
	40	1.49		2.30	
	44	0.67		1.03	
	49	9.50		12.43	
	76	9.00		11.72	
	82	0.02		0.03	
	86	0.01		0.01	
	96	3.27		3.58	
	97	0.05		0.05	
		Total:	374.84	Total:	424.97
451	29	0.20		0.20	
		Total:	0.20	Total:	0.20
461	17	27.47		35.60	
	23	1.14		1.51	
	24	0.68		0.74	
	28	16.82		18.88	
	34	23.00		13.22	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	44	11.06		17.06	
	49	1.84		2.41	
	53	20.62		27.80	
	76	0.42		0.55	
		Total:	103.05	Total:	117.77
491	76	0.62		0.81	
		Total:	0.62	Total:	0.81
512	20	1.35		1.55	
	28	40.87		45.87	
	44	0.10		0.15	
	49	7.09		9.28	
	79	0.15		0.20	
	96	0.08		0.09	
	97	1.70		1.86	
	99	1.73		1.73	
		Total:	53.07	Total:	60.73
513	24	0.68		0.74	
	44	25.28		39.01	
	49	3.99		5.22	
	82	0.10		0.14	
	97	3.37		3.69	
	99	0.05		0.05	
		Total:	33.47	Total:	48.85
541	22	0.45		0.60	
	27	0.44		0.60	
	60	49.72		70.58	
	97	18.09		19.82	
		Total:	68.70	Total:	91.60
551	10	0.03		0.01	
	20	0.22		0.25	
	22	0.45		0.60	
	28	1.00		1.12	
	40	0.34		0.52	
	43	0.10		0.11	
	73	0.26		0.42	
	80	7.84		10.33	
	82	50.78		72.88	
	84	0.44		0.63	
	91	0.85		0.93	
	94	0.10		0.11	
	95	1.13		1.24	
	96	3.34		3.66	
	97	0.80		0.88	
		Total:	67.68	Total:	93.69

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
561	79	0.30		0.41	
	96	0.05		0.05	
		Total:	0.35	Total:	0.46
591	34	36.22		20.82	
		Total:	36.22	Total:	20.82
611	40	27.01		0.00	
	42	0.25		0.00	
	49	25.28		0.00	
	73	21.28		0.00	
	96	54.15		0.00	
		Total:	127.97	Total:	0.00
725	82	0.03		0.04	
		Total:	0.03	Total:	0.04
731	49	28.59		37.42	
	82	1.04		1.49	
	96	1.35		1.48	
		Total:	30.98	Total:	40.39
741	10	0.22		0.09	
		Total:	0.22	Total:	0.09
			-----		-----
		Total:	10477.96	Total:	10748.30

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	492.05		667.78	
	223	425.13		590.75	
		Total:	917.18	Total:	1258.53
HALOGENATED SOLVENTS	211	8.11		12.48	
	741	0.22		0.09	
		Total:	8.33	Total:	12.57
NON-HALOGENATED SOLVENTS	212	25.93		34.72	
	213	6.88		8.19	
	214	448.18		542.81	
		Total:	480.99	Total:	585.72
ORGANIC LIQUIDS	133	1645.29		1859.96	
	134	573.58		769.14	
	341	0.04		0.06	
	342	10.40		11.91	
	343	31.10		41.18	
		Total:	2260.41	Total:	2682.25
PESTICIDES	232	0.32		0.39	
		Total:	0.32	Total:	0.39
DIOXINS	261	316.27		408.29	
	731	30.98		40.39	
		Total:	347.25	Total:	448.68
OILY SLUDGES	222	636.93		914.01	
	352	374.84		424.97	
		Total:	1011.77	Total:	1338.98
HALOGENATED ORGANIC SLUDGES & SOLIDS	351	0.45		0.69	
	451	0.20		0.20	
		Total:	0.65	Total:	0.89
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	316.62		469.91	
	491	0.62		0.81	
		Total:	317.24	Total:	470.72
DYE & PAINT SLUDGES AND RESINS	272	1.29		1.74	
	281	0.25		0.27	
	291	29.46		33.17	
	461	103.05		117.77	
		Total:	134.05	Total:	152.95
METAL-CONTAINING SLUDGES	171	8.48		11.10	
		Total:	8.48	Total:	11.10
METAL-CONTAINING LIQUIDS	111	160.38		277.36	
	121	0.46		0.70	

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	132	123.02		159.99	
	725	0.03		0.04	
		Total:	283.89	Total:	438.09
NON-METALLIC INORGANIC LIQUIDS	112	0.57		0.77	
	113	0.92		1.22	
	122	207.63		227.74	
	123	403.58		451.28	
	131	825.89		1273.95	
	135	39.29		35.64	
		Total:	1477.88	Total:	1990.60
SOIL	611	127.97		0.00	
		Total:	127.97	Total:	0.00
MISCELLANEOUS WASTES	141	3.13		3.55	
	151	2005.11		0.00	
	161	0.20		0.31	
	172	36.90		48.16	
	181	771.83		956.64	
	311	2.51		3.31	
	322	8.11		9.53	
	331	14.27		19.18	
	512	53.07		60.73	
	513	33.47		48.85	
	541	68.70		91.60	
	551	67.68		93.69	
	561	0.35		0.46	
	591	36.22		20.82	
		Total:	3101.55	Total:	1356.83

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
10	111	5.01		1.98	
	131	0.22		0.09	
	181	11.86		4.68	
	214	0.91		0.36	
	551	0.03		0.01	
	741	0.22		0.09	
	Total:		18.25	Total:	7.21
15	151	151.76		0.00	
	Total:		151.76	Total:	0.00
17	214	1.10		1.43	
	291	1.20		1.56	
	331	2.98		3.86	
	352	0.30		0.39	
	461	27.47		35.60	
	Total:		33.05	Total:	42.84
20	112	0.12		0.14	
	122	0.57		0.65	
	123	2.29		2.62	
	131	0.22		0.25	
	134	14.59		16.71	
	141	0.57		0.65	
	151	160.91		0.00	
	181	0.45		0.52	
	211	0.79		0.90	
	214	0.04		0.05	
	221	10.54		12.07	
	223	9.13		10.45	
	232	0.22		0.25	
	322	6.74		7.72	
	342	10.40		11.91	
	512	1.35		1.55	
	551	0.22		0.25	
	Total:		219.15	Total:	66.69
22	112	0.35		0.47	
	113	0.92		1.22	
	134	0.45		0.60	
	135	1.35		1.79	
	181	0.84		1.12	
	214	0.45		0.60	
	541	0.45		0.60	
	551	0.45		0.60	
	Total:		5.26	Total:	7.00
23	461	1.14		1.51	
	Total:		1.14	Total:	1.51
24	214	0.62		0.68	
	461	0.68		0.74	
	513	0.68		0.74	
	Total:		1.98	Total:	2.16
25	214	0.88		0.96	
	Total:		0.88	Total:	0.96

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
26	135	0.22		0.24	
	214	3.66		4.00	
	Total:		3.88	Total:	4.24
27	212	8.47		11.53	
	213	0.22		0.30	
	214	73.08		99.50	
	541	0.44		0.60	
	Total:		82.21	Total:	111.93
28	133	1613.60		1811.06	
	134	9.73		10.92	
	141	2.50		2.81	
	151	0.55		0.00	
	212	1.82		2.04	
	214	213.54		239.67	
	291	21.26		23.86	
	352	350.53		393.43	
	461	16.82		18.88	
	512	40.87		45.87	
	551	1.00		1.12	
	Total:		2272.22	Total:	2549.66
29	451	0.20		0.20	
	Total:		0.20	Total:	0.20
32	214	0.22		0.21	
	Total:		0.22	Total:	0.21
33	135	13.34		5.91	
	Total:		13.34	Total:	5.91
34	132	3.18		1.83	
	181	132.28		76.05	
	211	0.66		0.38	
	213	0.22		0.13	
	214	4.96		2.85	
	241	2.60		1.49	
	461	23.00		13.22	
	591	36.22		20.82	
	Total:		203.12	Total:	116.77
35	151	1.68		0.00	
	Total:		1.68	Total:	0.00
36	111	56.28		141.81	
	211	2.29		5.77	
	221	0.60		1.51	
	Total:		59.17	Total:	149.09
40	122	0.25		0.39	
	151	3.58		0.00	
	181	0.35		0.54	
	213	0.60		0.93	
	221	25.28		39.01	
	343	0.35		0.54	
	351	0.45		0.69	
	352	1.49		2.30	
	551	0.34		0.52	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	611	27.01		0.00	
		Total:	59.70	Total:	44.92
41	214	3.95		6.09	
	222	77.55		119.65	
		Total:	81.50	Total:	125.74
42	211	1.21		0.95	
	611	0.25		0.00	
		Total:	1.46	Total:	0.95
43	212	0.44		0.48	
	213	1.13		1.24	
	214	7.14		7.82	
	221	0.06		0.07	
	222	2.08		2.28	
	551	0.10		0.11	
		Total:	10.95	Total:	12.00
44	111	0.22		0.34	
	131	825.45		1273.61	
	132	6.46		9.97	
	133	31.69		48.90	
	134	306.26		472.54	
	151	19.36		0.00	
	161	0.20		0.31	
	172	0.45		0.69	
	212	1.35		2.08	
	214	1.55		2.39	
	221	149.77		231.08	
	222	218.91		337.76	
	223	217.64		335.80	
	241	268.34		414.03	
	272	0.22		0.34	
	331	0.22		0.34	
	352	0.67		1.03	
	461	11.06		17.06	
	512	0.10		0.15	
	513	25.28		39.01	
		Total:	2085.20	Total:	3187.43
48	111	25.51		39.33	
	121	0.42		0.65	
	151	165.89		0.00	
	211	1.37		2.11	
	212	0.22		0.34	
	214	1.59		2.45	
	222	1.66		2.56	
		Total:	196.66	Total:	47.44
49	121	0.04		0.05	
	123	42.29		55.35	
	132	112.41		147.13	
	135	4.25		5.56	
	151	221.98		0.00	
	171	8.48		11.10	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	181	40.78		53.38	
	211	0.49		0.64	
	214	3.70		4.84	
	221	107.53		140.74	
	222	143.57		187.91	
	223	119.86		156.88	
	241	2.30		3.01	
	261	283.38		370.90	
	272	1.07		1.40	
	291	0.40		0.52	
	331	1.05		1.37	
	343	4.43		5.80	
	352	9.50		12.43	
	461	1.84		2.41	
	512	7.09		9.28	
	513	3.99		5.22	
	611	25.28		0.00	
	731	28.59		37.42	
	Total:		1174.30	Total:	1213.34
53	212	3.66		4.93	
	214	35.39		47.72	
	221	1.14		1.54	
	461	20.62		27.80	
	Total:		60.81	Total:	81.99
55	134	10.42		14.05	
	212	1.72		2.32	
	214	15.83		21.34	
	Total:		27.97	Total:	37.71
60	111	40.45		57.42	
	181	552.80		784.77	
	541	49.72		70.58	
	Total:		642.97	Total:	912.77
65	151	639.30		0.00	
	Total:		639.30	Total:	0.00
70	214	0.22		0.35	
	Total:		0.22	Total:	0.35
72	151	0.05		0.00	
	Total:		0.05	Total:	0.00
73	112	0.10		0.16	
	135	0.14		0.23	
	141	0.01		0.02	
	211	0.05		0.08	
	212	0.22		0.36	
	214	0.22		0.36	
	221	1.83		2.98	
	222	5.45		8.88	
	241	7.22		11.76	
	331	0.07		0.11	
	551	0.26		0.42	
	611	21.28		0.00	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	36.85	Total:	25.36
75	212	6.25		8.14	
	214	40.17		52.31	
	222	5.00		6.51	
	343	15.87		20.67	
		Total:	67.29	Total:	87.63
76	111	2.05		2.67	
	122	0.22		0.29	
	151	0.03		0.00	
	172	36.45		47.47	
	181	0.02		0.03	
	211	0.32		0.42	
	213	1.99		2.59	
	214	14.72		19.17	
	222	143.82		187.29	
	223	5.00		6.51	
	352	9.00		11.72	
	461	0.42		0.55	
	491	0.62		0.81	
		Total:	214.66	Total:	279.52
78	211	0.41		0.56	
		Total:	0.41	Total:	0.56
79	151	0.85		0.00	
	223	2.40		3.25	
	232	0.10		0.14	
	261	1.60		2.17	
	331	9.90		13.43	
	343	10.45		14.17	
	512	0.15		0.20	
	561	0.30		0.41	
		Total:	25.75	Total:	33.77
80	151	23.56		0.00	
	212	0.45		0.59	
	214	0.24		0.32	
	311	2.51		3.31	
	322	1.37		1.81	
	551	7.84		10.33	
		Total:	35.97	Total:	16.36
82	122	0.20		0.29	
	135	0.02		0.03	
	141	0.05		0.07	
	151	443.36		0.00	
	211	0.30		0.43	
	212	1.33		1.91	
	213	0.07		0.10	
	214	1.33		1.91	
	221	53.39		76.63	
	261	2.75		3.95	
	331	0.05		0.07	
	341	0.04		0.06	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	0.02		0.03	
	513	0.10		0.14	
	551	50.78		72.88	
	725	0.03		0.04	
	731	1.04		1.49	
	Total:		554.86	Total:	160.03
83	214	1.77		2.54	
	Total:		1.77	Total:	2.54
84	551	0.44		0.63	
	Total:		0.44	Total:	0.63
86	352	0.01		0.01	
	Total:		0.01	Total:	0.01
89	151	9.30		0.00	
	221	12.51		20.38	
	222	34.80		56.69	
	Total:		56.61	Total:	77.07
91	132	0.22		0.24	
	151	60.82		0.00	
	181	0.57		0.62	
	213	0.22		0.24	
	261	0.02		0.02	
	551	0.95		1.04	
	Total:		62.80	Total:	2.16
95	111	0.22		0.24	
	211	0.22		0.24	
	214	0.68		0.74	
	551	1.13		1.24	
	Total:		2.25	Total:	2.46
96	111	0.07		0.08	
	123	358.55		392.82	
	135	19.97		21.88	
	151	1.05		0.00	
	181	16.01		17.54	
	214	17.26		18.91	
	222	0.84		0.92	
	223	0.41		0.45	
	261	8.13		8.91	
	281	0.25		0.27	
	352	3.27		3.58	
	512	0.08		0.09	
	551	3.34		3.66	
	561	0.05		0.05	
	611	54.15		0.00	
	731	1.35		1.48	
	Total:		484.78	Total:	470.64
97	111	30.57		33.49	
	122	206.39		226.12	
	123	0.45		0.49	
	132	0.75		0.82	
	134	232.13		254.32	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	151	53.18		0.00	
	181	15.87		17.39	
	213	2.43		2.66	
	214	2.96		3.24	
	221	129.40		141.77	
	222	3.25		3.56	
	223	70.35		77.07	
	241	36.16		39.62	
	261	20.39		22.34	
	291	6.60		7.23	
	352	0.05		0.05	
	512	1.70		1.86	
	513	3.37		3.69	
	541	18.09		19.82	
	551	0.80		0.88	
		Total:	834.89	Total:	856.42
99	151	47.90		0.00	
	223	0.34		0.34	
	512	1.73		1.73	
	513	0.05		0.05	
		Total:	50.02	Total:	2.12

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	151	47.90		0.00	
	223	0.34		0.34	
	512	1.73		1.73	
	513	0.05		0.05	
	Total:		50.02	Total:	2.12
Agriculture and Mining	111	5.01		1.98	
	131	0.22		0.09	
	181	11.86		4.68	
	214	0.91		0.36	
	551	0.03		0.01	
	741	0.22		0.09	
	Total:		18.25	Total:	7.21
Construction	151	151.76		0.00	
	214	1.10		1.43	
	291	1.20		1.56	
	331	2.98		3.86	
	352	0.30		0.39	
	461	27.47		35.60	
	Total:		184.81	Total:	42.84
Manufacturing	111	56.28		141.81	
	112	0.47		0.61	
	113	0.92		1.22	
	122	0.57		0.65	
	123	2.29		2.62	
	131	0.22		0.25	
	132	3.18		1.83	
	133	1613.60		1811.06	
	134	24.77		28.23	
	135	14.91		7.94	
	141	3.07		3.46	
	151	163.14		0.00	
	181	133.57		77.69	
	211	3.74		7.05	
	212	10.29		13.57	
	213	0.44		0.43	
	214	297.45		348.52	
	221	11.14		13.58	
	223	9.13		10.45	
	232	0.22		0.25	
	241	2.60		1.49	
	291	21.26		23.86	
	322	6.74		7.72	
	342	10.40		11.91	
	352	350.53		393.43	
	451	0.20		0.20	
	461	41.64		34.35	
	512	42.22		47.42	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	513	0.68		0.74	
	541	0.89		1.20	
	551	1.67		1.97	
	591	36.22		20.82	
		Total:	2864.45	Total:	3016.33
Transportation, Communication, Utilities	111	25.73		39.67	
	121	0.46		0.70	
	122	0.25		0.39	
	123	42.29		55.35	
	131	825.45		1273.61	
	132	118.87		157.10	
	133	31.69		48.90	
	134	306.26		472.54	
	135	4.25		5.56	
	151	410.81		0.00	
	161	0.20		0.31	
	171	8.48		11.10	
	172	0.45		0.69	
	181	41.13		53.92	
	211	3.07		3.70	
	212	1.57		2.42	
	213	0.60		0.93	
	214	10.79		15.77	
	221	282.58		410.83	
	222	441.69		647.88	
	223	337.50		492.68	
	241	270.64		417.04	
	261	283.38		370.90	
	272	1.29		1.74	
	291	0.40		0.52	
	331	1.27		1.71	
	343	4.78		6.34	
	351	0.45		0.69	
	352	11.66		15.76	
	461	12.90		19.47	
	512	7.19		9.43	
	513	29.27		44.23	
	551	0.34		0.52	
	611	52.54		0.00	
	731	28.59		37.42	
		Total:	3598.82	Total:	4619.82
Retail Trade	134	10.42		14.05	
	212	5.38		7.25	
	214	51.22		69.06	
	221	1.14		1.54	
	461	20.62		27.80	
		Total:	88.78	Total:	119.70

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Finance, Insurance & Real Estate	111	40.45		57.42	
	151	145.49		0.00	
	181	552.80		784.77	
	541	49.72		70.58	
		Total:	788.46	Total:	912.77
Services	111	2.05		2.67	
	112	0.10		0.16	
	122	0.42		0.58	
	135	0.16		0.26	
	141	0.06		0.09	
	151	970.96		0.00	
	172	36.45		47.47	
	181	0.02		0.03	
	211	1.08		1.49	
	212	8.25		11.00	
	213	2.06		2.69	
	214	58.67		76.96	
	221	67.73		99.99	
	222	189.07		259.37	
	223	7.40		9.76	
	232	0.10		0.14	
	241	7.22		11.76	
	261	4.35		6.12	
	311	2.51		3.31	
	322	1.37		1.81	
	331	10.02		13.61	
	341	0.04		0.06	
	343	26.32		34.84	
	352	9.03		11.76	
	461	0.42		0.55	
	491	0.62		0.81	
	512	0.15		0.20	
	513	0.10		0.14	
	551	59.32		84.26	
	561	0.30		0.41	
	611	21.28		0.00	
	725	0.03		0.04	
	731	1.04		1.49	
		Total:	1488.70	Total:	683.83
Government	111	30.86		33.81	
	122	206.39		226.12	
	123	359.00		393.31	
	132	0.97		1.06	
	134	232.13		254.32	
	135	19.97		21.88	
	151	115.05		0.00	
	181	32.45		35.55	
	211	0.22		0.24	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	212	0.44		0.48	
	213	3.78		4.14	
	214	28.04		30.71	
	221	129.46		141.84	
	222	6.17		6.76	
	223	70.76		77.52	
	241	36.16		39.62	
	261	28.54		31.27	
	281	0.25		0.27	
	291	6.60		7.23	
	352	3.32		3.63	
	512	1.78		1.95	
	513	3.37		3.69	
	541	18.09		19.82	
	551	6.32		6.93	
	561	0.05		0.05	
	611	54.15		0.00	
	731	1.35		1.48	
		Total:	1395.67	Total:	1343.68

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
10	HALOGENATED SOLVENTS	0.22		0.09	
	NON-HALOGENATED SOLVENTS	0.91		0.36	
	METAL-CONTAINING LIQUIDS	5.01		1.98	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.09	
	MISCELLANEOUS WASTES	51.47		55.99	
	Total:		57.83	Total:	58.51
17	NON-HALOGENATED SOLVENTS	1.10		1.43	
	OILY SLUDGES	0.30		0.39	
	DYE & PAINT SLUDGES AND RESINS	28.67		37.16	
	MISCELLANEOUS WASTES	115.16		0.00	
	Total:		145.23	Total:	38.98
20	WASTE OIL	19.67		22.52	
	HALOGENATED SOLVENTS	0.79		0.90	
	NON-HALOGENATED SOLVENTS	0.04		0.05	
	ORGANIC LIQUIDS	24.99		28.62	
	PESTICIDES	0.22		0.25	
	NON-METALLIC INORGANIC LIQUIDS	3.20		3.66	
	MISCELLANEOUS WASTES	170.24		194.93	
	Total:		219.15	Total:	250.93
22	NON-HALOGENATED SOLVENTS	0.45		0.60	
	ORGANIC LIQUIDS	0.45		0.60	
	NON-METALLIC INORGANIC LIQUIDS	2.62		3.48	
	MISCELLANEOUS WASTES	1.74		2.32	
	Total:		5.26	Total:	7.00
23	DYE & PAINT SLUDGES AND RESINS	1.14		1.51	
	Total:		1.14	Total:	1.51
24	NON-HALOGENATED SOLVENTS	0.62		0.68	
	DYE & PAINT SLUDGES AND RESINS	0.68		0.74	
	MISCELLANEOUS WASTES	0.68		0.74	
	Total:		1.98	Total:	2.16
25	NON-HALOGENATED SOLVENTS	4.54		4.96	
	Total:		4.54	Total:	4.96
26	NON-METALLIC INORGANIC LIQUIDS	0.22		0.24	
	Total:		0.22	Total:	0.24
27	NON-HALOGENATED SOLVENTS	81.77		111.33	
	MISCELLANEOUS WASTES	0.44		0.60	
	Total:		82.21	Total:	111.93
28	NON-HALOGENATED SOLVENTS	215.36		241.71	
	ORGANIC LIQUIDS	1623.33		1821.98	
	OILY SLUDGES	350.53		393.43	
	DYE & PAINT SLUDGES AND RESINS	38.08		42.74	
	MISCELLANEOUS WASTES	44.92		50.42	
	Total:		2272.22	Total:	2550.28
29	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.20		0.20	
	Total:		0.20	Total:	0.20
32	NON-HALOGENATED SOLVENTS	0.22		0.21	
	Total:		0.22	Total:	0.21
33	NON-METALLIC INORGANIC LIQUIDS	13.34		5.91	
	Total:		13.34	Total:	5.91
34	HALOGENATED SOLVENTS	0.66		0.38	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-HALOGENATED SOLVENTS	5.18		2.98	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.60		1.49	
	DYE & PAINT SLUDGES AND RESINS	23.00		13.22	
	METAL-CONTAINING LIQUIDS	3.18		1.83	
	MISCELLANEOUS WASTES	170.18		99.81	
	Total:		204.80	Total:	119.71
36	WASTE OIL	0.60		1.51	
	HALOGENATED SOLVENTS	2.29		5.77	
	METAL-CONTAINING LIQUIDS	56.28		141.81	
	Total:		59.17	Total:	149.09
40	WASTE OIL	25.28		39.01	
	NON-HALOGENATED SOLVENTS	0.60		0.93	
	ORGANIC LIQUIDS	0.35		0.54	
	OILY SLUDGES	1.49		2.30	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.45		0.69	
	NON-METALLIC INORGANIC LIQUIDS	0.25		0.39	
	SOIL	27.01		0.00	
	MISCELLANEOUS WASTES	4.27		0.00	
	Total:		59.70	Total:	43.86
41	NON-HALOGENATED SOLVENTS	3.95		6.09	
	OILY SLUDGES	77.55		119.65	
	Total:		81.50	Total:	125.74
42	HALOGENATED SOLVENTS	1.21		0.95	
	SOIL	0.25		0.00	
	Total:		1.46	Total:	0.95
43	WASTE OIL	0.06		0.07	
	NON-HALOGENATED SOLVENTS	8.71		9.54	
	OILY SLUDGES	2.08		2.28	
	MISCELLANEOUS WASTES	0.10		0.11	
	Total:		10.95	Total:	12.00
44	WASTE OIL	367.41		566.88	
	NON-HALOGENATED SOLVENTS	2.90		4.47	
	ORGANIC LIQUIDS	337.95		521.44	
	OILY SLUDGES	219.58		338.79	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	268.34		414.03	
	DYE & PAINT SLUDGES AND RESINS	11.28		17.40	
	METAL-CONTAINING LIQUIDS	6.68		10.31	
	NON-METALLIC INORGANIC LIQUIDS	825.45		1273.61	
	MISCELLANEOUS WASTES	45.61		0.00	
	Total:		2085.20	Total:	3146.93
48	HALOGENATED SOLVENTS	1.37		2.11	
	NON-HALOGENATED SOLVENTS	1.81		2.79	
	OILY SLUDGES	1.66		2.56	
	METAL-CONTAINING LIQUIDS	25.93		39.98	
	MISCELLANEOUS WASTES	165.89		0.00	
	Total:		196.66	Total:	47.44
49	WASTE OIL	227.39		297.62	
	HALOGENATED SOLVENTS	0.49		0.64	
	NON-HALOGENATED SOLVENTS	3.70		4.84	
	ORGANIC LIQUIDS	4.43		5.80	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	DIOXINS	311.97		408.32	
	OILY SLUDGES	153.07		200.34	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.30		3.01	
	DYE & PAINT SLUDGES AND RESINS	3.31		4.33	
	METAL-CONTAINING SLUDGES	8.48		11.10	
	METAL-CONTAINING LIQUIDS	112.45		147.18	
	NON-METALLIC INORGANIC LIQUIDS	46.54		60.91	
	SOIL	25.28		0.00	
	MISCELLANEOUS WASTES	274.89		0.00	
	Total:		1174.30	Total:	1144.09
53	WASTE OIL	1.14		1.54	
	NON-HALOGENATED SOLVENTS	39.05		52.65	
	DYE & PAINT SLUDGES AND RESINS	20.62		27.80	
	Total:		60.81	Total:	81.99
55	NON-HALOGENATED SOLVENTS	17.55		23.66	
	ORGANIC LIQUIDS	10.42		14.05	
	Total:		27.97	Total:	37.71
60	METAL-CONTAINING LIQUIDS	40.45		57.42	
	MISCELLANEOUS WASTES	748.01		1061.89	
	Total:		788.46	Total:	1119.31
70	NON-HALOGENATED SOLVENTS	0.22		0.35	
	MISCELLANEOUS WASTES	493.86		0.00	
	Total:		494.08	Total:	0.35
73	WASTE OIL	1.83		2.98	
	HALOGENATED SOLVENTS	0.05		0.08	
	NON-HALOGENATED SOLVENTS	0.44		0.72	
	OILY SLUDGES	5.45		8.88	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	7.22		11.76	
	NON-METALLIC INORGANIC LIQUIDS	0.24		0.39	
	SOIL	21.28		0.00	
	MISCELLANEOUS WASTES	0.34		0.55	
	Total:		36.85	Total:	25.36
75	NON-HALOGENATED SOLVENTS	46.42		60.45	
	ORGANIC LIQUIDS	15.87		20.67	
	OILY SLUDGES	5.00		6.51	
	Total:		67.29	Total:	87.63
76	WASTE OIL	5.00		6.51	
	HALOGENATED SOLVENTS	0.32		0.42	
	NON-HALOGENATED SOLVENTS	16.71		21.76	
	OILY SLUDGES	152.82		199.01	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.62		0.81	
	DYE & PAINT SLUDGES AND RESINS	0.42		0.55	
	METAL-CONTAINING LIQUIDS	2.05		2.67	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.29	
	MISCELLANEOUS WASTES	36.50		0.00	
	Total:		214.66	Total:	232.02
78	HALOGENATED SOLVENTS	0.41		0.56	
	Total:		0.41	Total:	0.56
79	WASTE OIL	2.40		3.25	
	ORGANIC LIQUIDS	10.45		14.17	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	PESTICIDES	0.10		0.14	
	DIOXINS	1.60		2.17	
	MISCELLANEOUS WASTES	11.20		0.00	
	Total:		25.75	Total:	19.73
80	NON-HALOGENATED SOLVENTS	0.69		0.91	
	MISCELLANEOUS WASTES	35.28		0.00	
	Total:		35.97	Total:	0.91
82	WASTE OIL	53.39		76.63	
	HALOGENATED SOLVENTS	0.30		0.43	
	NON-HALOGENATED SOLVENTS	2.73		3.92	
	ORGANIC LIQUIDS	0.04		0.06	
	DIOXINS	3.79		5.44	
	OILY SLUDGES	0.02		0.03	
	METAL-CONTAINING LIQUIDS	0.03		0.04	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.32	
	MISCELLANEOUS WASTES	494.34		709.49	
	Total:		554.86	Total:	796.36
83	NON-HALOGENATED SOLVENTS	1.77		2.54	
	Total:		1.77	Total:	2.54
84	MISCELLANEOUS WASTES	0.44		0.63	
	Total:		0.44	Total:	0.63
86	OILY SLUDGES	0.01		0.01	
	Total:		0.01	Total:	0.01
89	WASTE OIL	12.51		20.38	
	OILY SLUDGES	34.80		56.69	
	MISCELLANEOUS WASTES	9.30		0.00	
	Total:		56.61	Total:	77.07
91	NON-HALOGENATED SOLVENTS	0.22		0.24	
	DIOXINS	0.02		0.02	
	METAL-CONTAINING LIQUIDS	0.22		0.24	
	MISCELLANEOUS WASTES	62.34		0.00	
	Total:		62.80	Total:	0.50
95	HALOGENATED SOLVENTS	0.22		0.24	
	NON-HALOGENATED SOLVENTS	0.68		0.74	
	METAL-CONTAINING LIQUIDS	0.22		0.24	
	MISCELLANEOUS WASTES	1.13		1.24	
	Total:		2.25	Total:	2.46
96	WASTE OIL	0.41		0.45	
	NON-HALOGENATED SOLVENTS	17.26		18.91	
	DIOXINS	9.48		10.39	
	OILY SLUDGES	4.11		4.50	
	DYE & PAINT SLUDGES AND RESINS	0.25		0.27	
	METAL-CONTAINING LIQUIDS	0.07		0.08	
	NON-METALLIC INORGANIC LIQUIDS	378.52		414.70	
	SOIL	54.15		0.00	
	MISCELLANEOUS WASTES	20.53		0.00	
	Total:		484.78	Total:	449.30
97	WASTE OIL	199.75		218.84	
	NON-HALOGENATED SOLVENTS	5.39		5.90	
	ORGANIC LIQUIDS	232.13		254.32	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	DIOXINS	20.39		22.34	
	OILY SLUDGES	3.30		3.61	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	36.16		39.62	
	DYE & PAINT SLUDGES AND RESINS	6.60		7.23	
	METAL-CONTAINING LIQUIDS	31.32		34.31	
	NON-METALLIC INORGANIC LIQUIDS	206.84		226.61	
	MISCELLANEOUS WASTES	93.01		0.00	
	Total:		834.89	Total:	812.78
99	WASTE OIL	0.34		0.34	
	MISCELLANEOUS WASTES	49.68		0.00	
	Total:		50.02	Total:	0.34

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN SAN FRANCISCO COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	2	2	1
Agriculture & Mining	7	6	4
Construction	43	39	26
Manufacturing	3,016	2,715	1,810
Transport, Communication, Utilities	4,620	4,158	2,772
Wholesale Trade	0	0	0
Retail Trade	120	108	72
Finance, Insurance, & Real Estate	913	821	548
Services	684	615	410
Government	1,344	1,209	806
TOTALS	10,748	9,673	6,449

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN SAN FRANCISCO COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	1,259	1,133	755
Halogenated Solvents	13	11	8
Non-halogenated Solvents	586	527	351
Organic Liquids	2,682	2,414	1,609
Pesticides	*	*	*
Dioxins	449	404	269
Oil Sludges	1,339	1,205	803
Halogenated Organic Sludges & Solids	1	1	1
Non-halogenated Organic Sludges&Solids	471	424	282
Dye & Paint Sludges & Resins	153	138	92
Metal-Containing Sludges	11	10	7
Metal-Containing Liquids	438	394	263
Cyanide & Metal Liquids	0	0	0
Non-metallic Inorganic Liquids	1,991	1,792	1,194
Non-metallic Inorganic Sludges	0	0	0
Contaminated Soil	0	0	0
Miscellaneous Wastes	1,357	1,221	814
TOTALS	10,748	9,673	6,449

* = less than one ton, but greater than zero

9/1/88

COUNTY: SANMATEO

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	28	0.12		0.19	
	34	0.99		1.09	
	35	0.22		0.41	
	36	167.05		166.96	
	37	1.66		1.83	
	45	2.69		4.74	
	48	4.58		9.00	
	49	2.63		3.11	
	73	153.86		336.26	
		Total:	333.80	Total:	523.59
112	28	0.10		0.16	
	34	0.33		0.36	
	36	14.07		14.06	
	73	9.15		20.00	
	80	0.02		0.02	
		Total:	23.67	Total:	34.60
113	33	4.17		3.56	
	36	50.54		50.51	
	49	0.04		0.05	
	50	0.32		0.47	
		Total:	55.07	Total:	54.59
121	20	1.14		1.47	
	34	2.14		2.36	
	35	2.18		4.04	
	36	49.45		49.42	
	45	201.41		355.25	
	73	349.29		763.37	
		Total:	605.61	Total:	1175.91
122	28	0.11		0.18	
	29	0.22		0.20	
	34	0.15		0.17	
	36	23.36		23.35	
	38	0.10		0.28	
	49	0.45		0.53	
	73	0.30		0.66	
		Total:	24.69	Total:	25.37
123	34	0.22		0.24	
	36	78.04		78.00	
		Total:	78.26	Total:	78.24
131	28	15.42		24.63	
	34	0.68		0.75	
	36	16.52		16.51	
	49	4.80		5.68	
	73	1.01		2.21	
		Total:	38.43	Total:	49.78

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
132	28	5.96		9.52	
	34	0.90		0.99	
	36	85.31		85.26	
	37	2.79		3.08	
	73	15.19		33.20	
		Total:	110.15	Total:	132.05
133	36	0.16		0.16	
	38	4.25		12.01	
		Total:	4.41	Total:	12.17
134	15	17.92		24.84	
	28	44.08		70.40	
	36	0.49		0.49	
	42	10.42		18.37	
	48	3.12		6.13	
	50	0.68		1.00	
	73	17.09		37.35	
	75	31.89		36.22	
	94	4.17		4.66	
		Total:	129.86	Total:	199.46
135	27	3.21		5.03	
	28	21.83		34.87	
	36	674.51		674.13	
	38	3.79		10.71	
	48	16.68		32.76	
	49	0.25		0.30	
	73	8.11		17.72	
		Total:	728.38	Total:	775.52
141	36	1.70		1.70	
	92	0.05		0.06	
		Total:	1.75	Total:	1.76
151	17	0.84		0.00	
	20	1.75		0.00	
	27	0.15		0.00	
	28	4.77		0.00	
	36	103.71		0.00	
	43	6.74		0.00	
	45	9.00		0.00	
	48	0.84		0.00	
	49	3.18		0.00	
	57	9.26		0.00	
	73	0.05		0.00	
	80	2.52		0.00	
	91	2.72		0.00	
		Total:	145.53	Total:	0.00

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
161	73	15.17		33.15	
		Total:	15.17	Total:	33.15
171	34	2.25		2.48	
	36	8.78		8.78	
		Total:	11.03	Total:	11.26
172	45	387.55		683.57	
	49	1.83		2.16	
		Total:	389.38	Total:	685.73
181	28	50.53		80.71	
	29	0.39		0.35	
	33	1551.44		1323.19	
	34	4.29		4.72	
	36	27.35		27.33	
	37	0.24		0.27	
	45	17.47		30.81	
	48	7.50		14.73	
	49	0.38		0.45	
	50	0.05		0.07	
	55	15.17		21.79	
	73	2.01		4.39	
		Total:	1676.82	Total:	1508.81
211	27	13.11		20.55	
	28	15.90		25.40	
	30	0.45		0.52	
	33	0.22		0.19	
	34	6.23		6.86	
	35	3.81		7.06	
	36	100.75		100.69	
	37	0.36		0.40	
	38	1.02		2.88	
	39	1.57		4.44	
	45	148.04		261.12	
	49	498.03		588.99	
	50	0.04		0.06	
	72	6.84		5.32	
	73	29.19		63.79	
		Total:	825.56	Total:	1088.27
212	17	3.90		5.41	
	25	0.22		0.39	
	27	61.45		96.30	
	28	126.13		201.45	
	30	0.68		0.78	
	34	2.51		2.76	
	35	0.35		0.65	
	36	30.49		30.47	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	37	0.68		0.75	
	38	0.46		1.30	
	39	0.22		0.62	
	41	4.70		8.29	
	45	35.25		62.18	
	55	2.84		4.08	
	73	5.47		11.95	
	75	13.71		15.57	
	76	0.22		0.25	
	80	0.22		0.26	
	91	0.10		0.11	
	92	0.45		0.50	
		Total:	290.05	Total:	444.07
213	28	74.33		118.72	
	36	59.54		59.51	
	49	0.04		0.05	
	80	0.22		0.26	
		Total:	134.13	Total:	178.54
214	17	6.47		8.97	
	24	0.22		0.39	
	25	8.66		15.19	
	26	6.18		10.84	
	27	23.01		36.06	
	28	9613.16		15353.95	
	29	1.66		1.47	
	30	6.05		6.98	
	32	2.05		3.18	
	33	2.97		2.53	
	34	14.95		16.45	
	35	2.70		5.01	
	36	57.83		57.80	
	37	2.52		2.78	
	38	32.82		92.77	
	39	4.81		13.60	
	45	26.18		46.18	
	49	2.66		3.15	
	50	1.05		1.54	
	53	1.34		1.92	
	55	14.33		20.58	
	73	9.28		20.28	
	75	63.19		71.77	
	76	0.88		1.00	
	80	0.36		0.43	
	82	1.02		1.33	
	99	3.16		3.16	
		Total:	9909.51	Total:	15799.31
221	27	3.53		5.53	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	28	52.43		83.74	
	29	34223.58		30355.36	
	30	0.22		0.25	
	33	2.51		2.14	
	35	12.41		23.00	
	36	23.62		23.61	
	37	48.84		53.97	
	45	1656.51		2921.81	
	49	9.96		11.78	
	55	25.84		37.11	
	73	210.31		459.63	
	75	2.50		2.84	
	92	1.25		1.40	
		Total:	36273.51	Total:	33982.17
222	15	5.92		8.21	
	20	51.28		66.10	
	27	4.50		7.05	
	29	22.17		19.66	
	36	37.53		37.51	
	37	0.68		0.75	
	44	8.34		14.71	
	45	10.42		18.38	
	48	2.08		4.09	
	55	7.49		10.76	
	73	1.14		2.49	
	75	19.16		21.76	
		Total:	170.71	Total:	211.47
223	28	16.85		26.91	
	29	7.79		6.91	
	45	40.02		70.59	
	49	9.35		11.06	
	55	6.50		9.33	
	73	0.06		0.13	
	75	0.11		0.12	
		Total:	80.68	Total:	125.05
231	28	3.71		5.93	
		Total:	3.71	Total:	5.93
232	28	2433.05		3886.02	
	92	0.07		0.08	
	95	1.14		1.27	
		Total:	2434.26	Total:	3887.37
241	17	5.46		7.57	
	28	18.33		29.28	
	29	581.36		515.65	
	34	1.47		1.62	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	35	20.01		37.09	
	36	4.63		4.63	
	37	14.17		15.66	
	41	55.11		97.20	
	44	3.18		5.61	
	45	5.89		10.39	
	49	1.66		1.96	
	55	2.40		3.45	
		Total:	713.67	Total:	730.11
251	28	12.90		20.60	
		Total:	12.90	Total:	20.60
252	36	1.57		1.57	
		Total:	1.57	Total:	1.57
261	28	22.37		35.73	
	36	55.37		55.34	
	41	7.00		12.35	
	49	629.98		745.04	
	73	13.80		30.16	
	82	12.63		16.50	
	92	0.15		0.17	
		Total:	741.30	Total:	895.29
271	36	45.33		45.30	
		Total:	45.33	Total:	45.30
272	27	12.80		20.06	
	28	0.90		1.44	
	32	1.66		2.57	
	36	5.96		5.96	
	38	0.22		0.62	
	75	7.08		8.04	
		Total:	28.62	Total:	38.69
281	27	17.50		27.43	
	36	10.57		10.56	
	37	0.17		0.19	
	94	0.00		0.00	
		Total:	28.24	Total:	38.18
311	28	3.90		6.23	
		Total:	3.90	Total:	6.23
322	28	0.07		0.11	
		Total:	0.07	Total:	0.11
331	28	0.87		1.39	
	36	0.35		0.35	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	38	0.03		0.08	
	63	0.18		0.30	
	92	0.22		0.25	
	Total:		1.65	Total:	2.37
341	28	2.71		4.33	
	Total:		2.71	Total:	4.33
342	34	15.22		16.75	
	Total:		15.22	Total:	16.75
343	28	3.00		4.79	
	36	235.93		235.80	
	37	0.90		0.99	
	41	16.68		29.42	
	48	6.45		12.67	
	49	3.06		3.62	
	73	2.38		5.20	
	Total:		268.40	Total:	292.49
352	27	0.84		1.32	
	28	1504.07		2402.27	
	29	18.75		16.63	
	34	10.69		11.76	
	36	81.04		80.99	
	37	0.21		0.23	
	38	0.72		2.04	
	41	0.40		0.71	
	48	0.30		0.59	
	49	2.65		3.13	
	73	2.18		4.76	
	92	0.75		0.84	
	Total:		1622.60	Total:	2525.27
421	45	1519.31		2679.81	
	Total:		1519.31	Total:	2679.81
451	34	0.54		0.59	
	35	0.22		0.41	
	75	0.41		0.47	
	Total:		1.17	Total:	1.47
461	17	7.08		9.81	
	28	648.66		1036.03	
	34	1.11		1.22	
	35	0.50		0.93	
	36	12.63		12.62	
	39	0.22		0.62	
	45	288.05		508.07	
	49	0.11		0.13	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	75	20.64		23.44	
	76	0.21		0.24	
		Total:	979.21	Total:	1593.11
491	28	0.08		0.13	
	31	703.49		811.31	
	34	1.62		1.78	
	36	148.61		148.53	
	72	20.85		16.22	
	73	16.85		36.83	
		Total:	891.50	Total:	1014.80
512	27	52.21		81.82	
	28	56.78		90.69	
	29	125.10		110.96	
	36	1.74		1.74	
	37	0.28		0.31	
	49	32.90		38.91	
	55	24.44		35.10	
	73	19.32		42.22	
	75	12.64		14.36	
		Total:	325.41	Total:	416.11
513	28	1.19		1.90	
	37	0.01		0.01	
	49	29.78		35.22	
	73	0.44		0.96	
		Total:	31.42	Total:	38.09
531	75	0.60		0.68	
		Total:	0.60	Total:	0.68
551	27	0.02		0.03	
	28	15.33		24.48	
	36	41.01		40.99	
	37	0.54		0.60	
	49	0.88		1.04	
	50	0.35		0.51	
	73	27.40		59.88	
	80	0.78		0.93	
	82	0.80		1.05	
	91	0.07		0.08	
	94	0.54		0.60	
		Total:	87.72	Total:	130.19
591	45	16.85		29.72	
		Total:	16.85	Total:	29.72
611	28	461.77		0.00	
	34	0.12		0.00	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	36	310.91		0.00	
	45	337.07		0.00	
	49	232.58		0.00	
	73	89.33		0.00	
	75	29.49		0.00	
	80	18.54		0.00	
	92	63.20		0.00	
	94	0.40		0.00	
	99	549.31		0.00	
		Total:	2092.72	Total:	0.00
612	49	0.09		0.11	
		Total:	0.09	Total:	0.11
711	34	1.62		1.78	
	36	5.07		5.07	
		Total:	6.69	Total:	6.85
724	36	0.67		0.67	
		Total:	0.67	Total:	0.67
725	37	0.10		0.11	
	80	0.22		0.26	
		Total:	0.32	Total:	0.37
726	36	0.67		0.67	
		Total:	0.67	Total:	0.67
731	49	153.64		181.70	
		Total:	153.64	Total:	181.70
741	49	0.30		0.35	
		Total:	0.30	Total:	0.35
791	34	0.45		0.50	
	36	1.37		1.37	
	73	60.98		133.27	
		Total:	62.80	Total:	135.14
			-----		-----
		Total:	64151.40	Total:	71871.30

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	36273.51		33982.17	
	223	80.68		125.05	
		Total:	36354.19	Total:	34107.22
HALOGENATED SOLVENTS	211	825.56		1088.27	
	741	0.30		0.35	
		Total:	825.86	Total:	1088.62
NON-HALOGENATED SOLVENTS	212	290.05		444.07	
	213	134.13		178.54	
	214	9909.51		15799.31	
		Total:	10333.69	Total:	16421.92
ORGANIC LIQUIDS	133	4.41		12.17	
	134	129.86		199.46	
	341	2.71		4.33	
	342	15.22		16.75	
	343	268.40		292.49	
		Total:	420.60	Total:	525.20
PESTICIDES	231	3.71		5.93	
	232	2434.26		3887.37	
		Total:	2437.97	Total:	3893.30
DIOXINS	261	741.30		895.29	
	731	153.64		181.70	
		Total:	894.94	Total:	1076.99
OILY SLUDGES	222	170.71		211.47	
	352	1622.60		2525.27	
		Total:	1793.31	Total:	2736.74
HALOGENATED ORGANIC SLUDGES & SOLIDS	251	12.90		20.60	
	451	1.17		1.47	
		Total:	14.07	Total:	22.07
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	713.67		730.11	
	252	1.57		1.57	
	491	891.50		1014.80	
		Total:	1606.74	Total:	1746.48
DYE & PAINT SLUDGES AND RESINS	271	45.33		45.30	
	272	28.62		38.69	
	281	28.24		38.18	
	461	979.21		1593.11	
		Total:	1081.40	Total:	1715.28
METAL-CONTAINING SLUDGES	171	11.03		11.26	
		Total:	11.03	Total:	11.26

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
METAL-CONTAINING LIQUIDS	111	333.80		523.59	
	121	605.61		1175.91	
	132	110.15		132.05	
	724	0.67		0.67	
	725	0.32		0.37	
	726	0.67		0.67	
	Total:		1051.22	Total:	1833.26
CYANIDE & METAL LIQUIDS	711	6.69		6.85	
	Total:		6.69	Total:	6.85
NON-METALLIC INORGANIC LIQUIDS	112	23.67		34.60	
	113	55.07		54.59	
	122	24.69		25.37	
	123	78.26		78.24	
	131	38.43		49.78	
	135	728.38		775.52	
	791	62.80		135.14	
	Total:		1011.30	Total:	1153.24
NON-METALLIC INORGANIC SLUDGES	421	1519.31		2679.81	
	Total:		1519.31	Total:	2679.81
SOIL	611	2092.72		0.00	
	Total:		2092.72	Total:	0.00
MISCELLANEOUS WASTES	141	1.75		1.76	
	151	145.53		0.00	
	161	15.17		33.15	
	172	389.38		685.73	
	181	1676.82		1508.81	
	311	3.90		6.23	
	322	0.07		0.11	
	331	1.65		2.37	
	512	325.41		416.11	
	513	31.42		38.09	
	531	0.60		0.68	
	551	87.72		130.19	
	591	16.85		29.72	
	612	0.09		0.11	
	Total:		2696.36	Total:	2853.06

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
15	134	17.92		24.84	
	222	5.92		8.21	
	Total:		23.84	Total:	33.05
17	151	0.84		0.00	
	212	3.90		5.41	
	214	6.47		8.97	
	241	5.46		7.57	
	461	7.08		9.81	
	Total:		23.75	Total:	31.76
20	121	1.14		1.47	
	151	1.75		0.00	
	222	51.28		66.10	
	Total:		54.17	Total:	67.57
24	214	0.22		0.39	
	Total:		0.22	Total:	0.39
25	212	0.22		0.39	
	214	14.84		26.03	
	Total:		15.06	Total:	26.42
27	135	3.21		5.03	
	151	0.15		0.00	
	211	13.11		20.55	
	212	61.45		96.30	
	214	23.01		36.06	
	221	3.53		5.53	
	222	4.50		7.05	
	272	12.80		20.06	
	281	17.50		27.43	
	352	0.84		1.32	
	512	52.21		81.82	
	551	0.02		0.03	
	Total:		192.33	Total:	301.18
28	111	0.12		0.19	
	112	0.10		0.16	
	122	0.11		0.18	
	131	15.42		24.63	
	132	5.96		9.52	
	134	44.08		70.40	
	135	21.83		34.87	
	151	4.77		0.00	
	181	50.53		80.71	
	211	15.90		25.40	
	212	126.13		201.45	
	213	74.33		118.72	
	214	9613.16		15353.95	
	221	52.43		83.74	
	223	16.85		26.91	
	231	3.71		5.93	
	232	2433.05		3886.02	
	241	18.33		29.28	
	251	12.90		20.60	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	261	22.37		35.73	
	272	0.90		1.44	
	311	3.90		6.23	
	322	0.07		0.11	
	331	0.87		1.39	
	341	2.71		4.33	
	343	3.00		4.79	
	352	1504.07		2402.27	
	461	648.66		1036.03	
	491	0.08		0.13	
	512	56.78		90.69	
	513	1.19		1.90	
	551	15.33		24.48	
	611	461.77		0.00	
	Total:		15231.41	Total:	23582.18
29	122	0.22		0.20	
	181	0.39		0.35	
	214	1.66		1.47	
	221	34223.58		30355.36	
	222	22.17		19.66	
	223	7.79		6.91	
	241	581.36		515.65	
	352	18.75		16.63	
	512	125.10		110.96	
	Total:		34981.02	Total:	31027.19
30	211	0.45		0.52	
	212	0.68		0.78	
	214	6.05		6.98	
	221	0.22		0.25	
	Total:		7.40	Total:	8.53
31	491	703.49		811.31	
	Total:		703.49	Total:	811.31
32	214	2.05		3.18	
	272	1.66		2.57	
	Total:		3.71	Total:	5.75
33	113	4.17		3.56	
	181	1551.44		1323.19	
	211	0.22		0.19	
	214	2.97		2.53	
	221	2.51		2.14	
	Total:		1561.31	Total:	1331.61
34	111	0.99		1.09	
	112	0.33		0.36	
	121	2.14		2.36	
	122	0.15		0.17	
	123	0.22		0.24	
	131	0.68		0.75	
	132	0.90		0.99	
	171	2.25		2.48	
	181	4.29		4.72	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	211	6.23		6.86	
	212	2.51		2.76	
	214	14.95		16.45	
	241	1.47		1.62	
	342	15.22		16.75	
	352	10.69		11.76	
	451	0.54		0.59	
	461	1.11		1.22	
	491	1.62		1.78	
	611	0.12		0.00	
	711	1.62		1.78	
	791	0.45		0.50	
		Total:		68.48	Total:
35	111	0.22		0.41	
	121	2.18		4.04	
	211	3.81		7.06	
	212	0.35		0.65	
	214	2.70		5.01	
	221	12.41		23.00	
	241	20.01		37.09	
	451	0.22		0.41	
	461	0.50		0.93	
	Total:		42.40	Total:	78.60
36	111	167.05		166.96	
	112	14.07		14.06	
	113	50.54		50.51	
	121	49.45		49.42	
	122	23.36		23.35	
	123	78.04		78.00	
	131	16.52		16.51	
	132	85.31		85.26	
	133	0.16		0.16	
	134	0.49		0.49	
	135	674.51		674.13	
	141	1.70		1.70	
	151	103.71		0.00	
	171	8.78		8.78	
	181	27.35		27.33	
	211	100.75		100.69	
	212	30.49		30.47	
	213	59.54		59.51	
	214	57.83		57.80	
	221	23.62		23.61	
	222	37.53		37.51	
	241	4.63		4.63	
	252	1.57		1.57	
	261	55.37		55.34	
	271	45.33		45.30	
	272	5.96		5.96	
	281	10.57		10.56	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	331	0.35		0.35	
	343	235.93		235.80	
	352	81.04		80.99	
	461	12.63		12.62	
	491	148.61		148.53	
	512	1.74		1.74	
	551	41.01		40.99	
	611	310.91		0.00	
	711	5.07		5.07	
	724	0.67		0.67	
	726	0.67		0.67	
	791	1.37		1.37	
	Total:		2574.23	Total:	2158.41
37	111	1.66		1.83	
	132	2.79		3.08	
	181	0.24		0.27	
	211	0.36		0.40	
	212	0.68		0.75	
	214	2.52		2.78	
	221	48.84		53.97	
	222	0.68		0.75	
	241	14.17		15.66	
	281	0.17		0.19	
	343	0.90		0.99	
	352	0.21		0.23	
	512	0.28		0.31	
	513	0.01		0.01	
	551	0.54		0.60	
	725	0.10		0.11	
	Total:		74.15	Total:	81.93
38	122	0.10		0.28	
	133	4.25		12.01	
	135	3.79		10.71	
	211	1.02		2.88	
	212	0.46		1.30	
	214	32.82		92.77	
	272	0.22		0.62	
	331	0.03		0.08	
	352	0.72		2.04	
	Total:		43.41	Total:	122.69
39	211	1.57		4.44	
	212	0.22		0.62	
	214	4.81		13.60	
	461	0.22		0.62	
	Total:		6.82	Total:	19.28
41	212	4.70		8.29	
	241	55.11		97.20	
	261	7.00		12.35	
	343	16.68		29.42	
	352	0.40		0.71	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	83.89	Total:	147.97
42	134	10.42		18.37	
		Total:	10.42	Total:	18.37
43	151	6.74		0.00	
		Total:	6.74	Total:	0.00
44	222	8.34		14.71	
	241	3.18		5.61	
		Total:	11.52	Total:	20.32
45	111	2.69		4.74	
	121	201.41		355.25	
	151	9.00		0.00	
	172	387.55		683.57	
	181	17.47		30.81	
	211	148.04		261.12	
	212	35.25		62.18	
	214	26.18		46.18	
	221	1656.51		2921.81	
	222	10.42		18.38	
	223	40.02		70.59	
	241	5.89		10.39	
	421	1519.31		2679.81	
	461	288.05		508.07	
	591	16.85		29.72	
	611	337.07		0.00	
		Total:	4701.71	Total:	7682.62
48	111	4.58		9.00	
	134	3.12		6.13	
	135	16.68		32.76	
	151	0.84		0.00	
	181	7.50		14.73	
	222	2.08		4.09	
	343	6.45		12.67	
	352	0.30		0.59	
		Total:	41.55	Total:	79.97
49	111	2.63		3.11	
	113	0.04		0.05	
	122	0.45		0.53	
	131	4.80		5.68	
	135	0.25		0.30	
	151	3.18		0.00	
	172	1.83		2.16	
	181	0.38		0.45	
	211	498.03		588.99	
	213	0.04		0.05	
	214	2.66		3.15	
	221	9.96		11.78	
	223	9.35		11.06	
	241	1.66		1.96	
	261	629.98		745.04	
	343	3.06		3.62	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	2.65		3.13	
	461	0.11		0.13	
	512	32.90		38.91	
	513	29.78		35.22	
	551	0.88		1.04	
	611	232.58		0.00	
	612	0.09		0.11	
	731	153.64		181.70	
	741	0.30		0.35	
	Total:		1621.23	Total:	1638.52
50	113	0.32		0.47	
	134	0.68		1.00	
	181	0.05		0.07	
	211	0.04		0.06	
	214	1.05		1.54	
	551	0.35		0.51	
	Total:		2.49	Total:	3.65
53	214	1.34		1.92	
	Total:		1.34	Total:	1.92
55	181	15.17		21.79	
	212	2.84		4.08	
	214	14.33		20.58	
	221	25.84		37.11	
	222	7.49		10.76	
	223	6.50		9.33	
	241	2.40		3.45	
	512	24.44		35.10	
	Total:		99.01	Total:	142.20
57	151	9.26		0.00	
	Total:		9.26	Total:	0.00
63	331	0.18		0.30	
	Total:		0.18	Total:	0.30
72	211	6.84		5.32	
	491	20.85		16.22	
	Total:		27.69	Total:	21.54
73	111	153.86		336.26	
	112	9.15		20.00	
	121	349.29		763.37	
	122	0.30		0.66	
	131	1.01		2.21	
	132	15.19		33.20	
	134	17.09		37.35	
	135	8.11		17.72	
	151	0.05		0.00	
	161	15.17		33.15	
	181	2.01		4.39	
	211	29.19		63.79	
	212	5.47		11.95	
	214	9.28		20.28	
	221	210.31		459.63	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	222	1.14		2.49	
	223	0.06		0.13	
	261	13.80		30.16	
	343	2.38		5.20	
	352	2.18		4.76	
	491	16.85		36.83	
	512	19.32		42.22	
	513	0.44		0.96	
	551	27.40		59.88	
	611	89.33		0.00	
	791	60.98		133.27	
		Total:	1059.36	Total:	2119.86
75	134	31.89		36.22	
	212	13.71		15.57	
	214	63.19		71.77	
	221	2.50		2.84	
	222	19.16		21.76	
	223	0.11		0.12	
	272	7.08		8.04	
	451	0.41		0.47	
	461	20.64		23.44	
	512	12.64		14.36	
	531	0.60		0.68	
	611	29.49		0.00	
		Total:	201.42	Total:	195.27
76	212	0.22		0.25	
	214	0.88		1.00	
	461	0.21		0.24	
		Total:	1.31	Total:	1.49
80	112	0.02		0.02	
	151	2.52		0.00	
	212	0.22		0.26	
	213	0.22		0.26	
	214	0.36		0.43	
	551	0.78		0.93	
	611	18.54		0.00	
	725	0.22		0.26	
		Total:	22.88	Total:	2.16
82	214	1.02		1.33	
	261	12.63		16.50	
	551	0.80		1.05	
		Total:	14.45	Total:	18.88
91	151	2.72		0.00	
	212	0.10		0.11	
	551	0.07		0.08	
		Total:	2.89	Total:	0.19
92	141	0.05		0.06	
	212	0.45		0.50	
	221	1.25		1.40	
	232	0.07		0.08	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	261	0.15		0.17	
	331	0.22		0.25	
	352	0.75		0.84	
	611	63.20		0.00	
	Total:		66.14	Total:	3.30
94	134	4.17		4.66	
	281	0.00		0.00	
	551	0.54		0.60	
	611	0.40		0.00	
	Total:		5.11	Total:	5.26
95	232	1.14		1.27	
	Total:		1.14	Total:	1.27
99	214	3.16		3.16	
	611	549.31		0.00	
	Total:		552.47	Total:	3.16

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	214	3.16		3.16	
	611	549.31		0.00	
		Total:	552.47	Total:	3.16
Construction	134	17.92		24.84	
	151	0.84		0.00	
	212	3.90		5.41	
	214	6.47		8.97	
	222	5.92		8.21	
	241	5.46		7.57	
	461	7.08		9.81	
		Total:	47.59	Total:	64.81
Manufacturing	111	170.04		170.48	
	112	14.50		14.58	
	113	54.71		54.07	
	121	54.91		57.29	
	122	23.94		24.18	
	123	78.26		78.24	
	131	32.62		41.89	
	132	94.96		98.85	
	133	4.41		12.17	
	134	44.57		70.89	
	135	703.34		724.74	
	141	1.70		1.70	
	151	110.38		0.00	
	171	11.03		11.26	
	181	1634.24		1436.57	
	211	143.42		168.99	
	212	223.19		335.47	
	213	133.87		178.23	
	214	9779.59		15619.00	
	221	34367.14		30547.60	
	222	116.16		131.07	
	223	24.64		33.82	
	231	3.71		5.93	
	232	2433.05		3886.02	
	241	639.97		603.93	
	251	12.90		20.60	
	252	1.57		1.57	
	261	77.74		91.07	
	271	45.33		45.30	
	272	21.54		30.65	
	281	28.24		38.18	
	311	3.90		6.23	
	322	0.07		0.11	
	331	1.25		1.82	
	341	2.71		4.33	
	342	15.22		16.75	
	343	239.83		241.58	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	1616.32		2515.24	
	451	0.76		1.00	
	461	663.12		1051.42	
	491	853.80		961.75	
	512	236.11		285.52	
	513	1.20		1.91	
	551	56.90		66.10	
	611	772.80		0.00	
	711	6.69		6.85	
	724	0.67		0.67	
	725	0.10		0.11	
	726	0.67		0.67	
	791	1.82		1.87	
		Total:	55559.61	Total:	59698.27
Transportation, Communication, Utilities	111	9.90		16.85	
	113	0.04		0.05	
	121	201.41		355.25	
	122	0.45		0.53	
	131	4.80		5.68	
	134	13.54		24.50	
	135	16.93		33.06	
	151	13.02		0.00	
	172	389.38		685.73	
	181	25.35		45.99	
	211	646.07		850.11	
	212	39.95		70.47	
	213	0.04		0.05	
	214	28.84		49.33	
	221	1666.47		2933.59	
	222	20.84		37.18	
	223	49.37		81.65	
	241	65.84		115.16	
	261	636.98		757.39	
	343	26.19		45.71	
	352	3.35		4.43	
	421	1519.31		2679.81	
	461	288.16		508.20	
	512	32.90		38.91	
	513	29.78		35.22	
	551	0.88		1.04	
	591	16.85		29.72	
	611	569.65		0.00	
	612	0.09		0.11	
	731	153.64		181.70	
	741	0.30		0.35	
		Total:	6470.32	Total:	9587.77
Wholesale Trade	113	0.32		0.47	
	134	0.68		1.00	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	181	0.05		0.07	
	211	0.04		0.06	
	214	1.05		1.54	
	551	0.35		0.51	
		Total:	2.49	Total:	3.65
Retail Trade	151	9.26		0.00	
	181	15.17		21.79	
	212	2.84		4.08	
	214	15.67		22.50	
	221	25.84		37.11	
	222	7.49		10.76	
	223	6.50		9.33	
	241	2.40		3.45	
	512	24.44		35.10	
		Total:	109.61	Total:	144.12
Finance, Insurance & Real Estate	331	0.18		0.30	
		Total:	0.18	Total:	0.30
Services	111	153.86		336.26	
	112	9.17		20.02	
	121	349.29		763.37	
	122	0.30		0.66	
	131	1.01		2.21	
	132	15.19		33.20	
	134	48.98		73.57	
	135	8.11		17.72	
	151	2.57		0.00	
	161	15.17		33.15	
	181	2.01		4.39	
	211	36.03		69.11	
	212	19.62		28.03	
	213	0.22		0.26	
	214	74.73		94.81	
	221	212.81		462.47	
	222	20.30		24.25	
	223	0.17		0.25	
	261	26.43		46.66	
	272	7.08		8.04	
	343	2.38		5.20	
	352	2.18		4.76	
	451	0.41		0.47	
	461	20.85		23.68	
	491	37.70		53.05	
	512	31.96		56.58	
	513	0.44		0.96	
	531	0.60		0.68	
	551	28.98		61.86	
	611	137.36		0.00	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	725	0.22		0.26	
	791	60.98		133.27	
		Total:	1327.11	Total:	2359.20
Government	134	4.17		4.66	
	141	0.05		0.06	
	151	9.46		0.00	
	212	0.55		0.61	
	221	1.25		1.40	
	232	1.21		1.35	
	261	0.15		0.17	
	281	0.00		0.00	
	331	0.22		0.25	
	352	0.75		0.84	
	551	0.61		0.68	
	611	63.60		0.00	
		Total:	82.02	Total:	10.02

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
15	ORGANIC LIQUIDS	17.92		24.84	
	OILY SLUDGES	5.92		8.21	
	Total:		23.84	Total:	33.05
17	NON-HALOGENATED SOLVENTS	10.37		14.38	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.46		7.57	
	DYE & PAINT SLUDGES AND RESINS	7.08		9.81	
	MISCELLANEOUS WASTES	0.84		0.00	
	Total:		23.75	Total:	31.76
20	OILY SLUDGES	51.28		66.10	
	METAL-CONTAINING LIQUIDS	1.14		1.47	
	MISCELLANEOUS WASTES	1.75		0.00	
	Total:		54.17	Total:	67.57
24	NON-HALOGENATED SOLVENTS	15.28		26.81	
	Total:		15.28	Total:	26.81
27	WASTE OIL	3.53		5.53	
	HALOGENATED SOLVENTS	13.11		20.55	
	NON-HALOGENATED SOLVENTS	84.46		132.36	
	OILY SLUDGES	5.34		8.37	
	DYE & PAINT SLUDGES AND RESINS	30.30		47.49	
	NON-METALLIC INORGANIC LIQUIDS	3.21		5.03	
	MISCELLANEOUS WASTES	52.38		0.00	
	Total:		192.33	Total:	219.33
28	WASTE OIL	69.28		110.65	
	HALOGENATED SOLVENTS	15.90		25.40	
	NON-HALOGENATED SOLVENTS	9813.62		15674.12	
	ORGANIC LIQUIDS	49.79		79.52	
	PESTICIDES	2436.76		3891.95	
	DIOXINS	22.37		35.73	
	OILY SLUDGES	1504.07		2402.27	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	12.90		20.60	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	18.41		29.41	
	DYE & PAINT SLUDGES AND RESINS	649.56		1037.47	
	METAL-CONTAINING LIQUIDS	6.08		9.71	
	NON-METALLIC INORGANIC LIQUIDS	37.46		59.84	
	SOIL	461.77		0.00	
	MISCELLANEOUS WASTES	133.44		0.00	
	Total:		15231.41	Total:	23376.67
29	WASTE OIL	34231.37		30362.27	
	NON-HALOGENATED SOLVENTS	1.66		1.47	
	OILY SLUDGES	40.92		36.29	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	581.36		515.65	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.20	
	MISCELLANEOUS WASTES	125.49		111.31	
	Total:		34981.02	Total:	31027.19
30	WASTE OIL	0.22		0.25	
	HALOGENATED SOLVENTS	0.45		0.52	
	NON-HALOGENATED SOLVENTS	6.73		7.76	
	Total:		7.40	Total:	8.53
31	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	703.49		811.31	
	Total:		703.49	Total:	811.31

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
32	NON-HALOGENATED SOLVENTS	2.05		3.18	
	DYE & PAINT SLUDGES AND RESINS	1.66		2.57	
	Total:		3.71	Total:	5.75
33	WASTE OIL	2.51		2.14	
	HALOGENATED SOLVENTS	0.22		0.19	
	NON-HALOGENATED SOLVENTS	2.97		2.53	
	NON-METALLIC INORGANIC LIQUIDS	4.17		3.56	
	MISCELLANEOUS WASTES	1551.44		1323.19	
	Total:		1561.31	Total:	1331.61
34	HALOGENATED SOLVENTS	6.23		6.86	
	NON-HALOGENATED SOLVENTS	17.46		19.21	
	ORGANIC LIQUIDS	15.22		16.75	
	OILY SLUDGES	10.69		11.76	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.54		0.59	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	3.09		3.40	
	DYE & PAINT SLUDGES AND RESINS	1.11		1.22	
	METAL-CONTAINING SLUDGES	2.25		2.48	
	METAL-CONTAINING LIQUIDS	4.03		4.44	
	CYANIDE & METAL LIQUIDS	1.62		1.78	
	NON-METALLIC INORGANIC LIQUIDS	1.83		2.02	
	SOIL	0.12		0.00	
	MISCELLANEOUS WASTES	4.29		4.72	
	Total:		68.48	Total:	75.23
35	WASTE OIL	12.41		23.00	
	HALOGENATED SOLVENTS	3.81		7.06	
	NON-HALOGENATED SOLVENTS	3.05		5.66	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.22		0.41	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	20.01		37.09	
	DYE & PAINT SLUDGES AND RESINS	0.50		0.93	
	METAL-CONTAINING LIQUIDS	2.40		4.45	
	Total:		42.40	Total:	78.60
36	WASTE OIL	23.62		23.61	
	HALOGENATED SOLVENTS	100.75		100.69	
	NON-HALOGENATED SOLVENTS	147.86		147.78	
	ORGANIC LIQUIDS	236.58		236.45	
	DIOXINS	55.37		55.34	
	OILY SLUDGES	118.57		118.50	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	154.81		154.73	
	DYE & PAINT SLUDGES AND RESINS	74.49		74.44	
	METAL-CONTAINING SLUDGES	8.78		8.78	
	METAL-CONTAINING LIQUIDS	303.15		302.98	
	CYANIDE & METAL LIQUIDS	5.07		5.07	
	NON-METALLIC INORGANIC LIQUIDS	858.41		857.93	
	SOIL	310.91		0.00	
	MISCELLANEOUS WASTES	175.86		175.76	
	Total:		2574.23	Total:	2262.06
37	WASTE OIL	48.84		53.97	
	HALOGENATED SOLVENTS	0.36		0.40	
	NON-HALOGENATED SOLVENTS	3.20		3.53	
	ORGANIC LIQUIDS	0.90		0.99	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	OILY SLUDGES	0.89		0.98	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	14.17		15.66	
	DYE & PAINT SLUDGES AND RESINS	0.17		0.19	
	METAL-CONTAINING LIQUIDS	4.55		5.02	
	MISCELLANEOUS WASTES	1.07		1.19	
	Total:		74.15	Total:	81.93
38	HALOGENATED SOLVENTS	1.02		2.88	
	NON-HALOGENATED SOLVENTS	33.28		94.07	
	ORGANIC LIQUIDS	4.25		12.01	
	OILY SLUDGES	0.72		2.04	
	DYE & PAINT SLUDGES AND RESINS	0.22		0.62	
	NON-METALLIC INORGANIC LIQUIDS	3.89		10.99	
	MISCELLANEOUS WASTES	0.03		0.08	
	Total:		43.41	Total:	122.69
39	HALOGENATED SOLVENTS	1.57		4.44	
	NON-HALOGENATED SOLVENTS	5.03		14.22	
	DYE & PAINT SLUDGES AND RESINS	0.22		0.62	
	Total:		6.82	Total:	19.28
41	NON-HALOGENATED SOLVENTS	4.70		8.29	
	ORGANIC LIQUIDS	16.68		29.42	
	DIOXINS	7.00		12.35	
	OILY SLUDGES	0.40		0.71	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	55.11		97.20	
	Total:		83.89	Total:	147.97
42	ORGANIC LIQUIDS	10.42		18.37	
	Total:		10.42	Total:	18.37
43	MISCELLANEOUS WASTES	6.74		0.00	
	Total:		6.74	Total:	0.00
44	OILY SLUDGES	8.34		14.71	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	3.18		5.61	
	Total:		11.52	Total:	20.32
45	WASTE OIL	1696.53		2992.40	
	HALOGENATED SOLVENTS	148.04		261.12	
	NON-HALOGENATED SOLVENTS	61.43		108.36	
	OILY SLUDGES	10.42		18.38	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.89		10.39	
	DYE & PAINT SLUDGES AND RESINS	288.05		508.07	
	METAL-CONTAINING LIQUIDS	204.10		359.99	
	NON-METALLIC INORGANIC SLUDGES	1519.31		2679.81	
	SOIL	337.07		0.00	
	MISCELLANEOUS WASTES	430.87		0.00	
	Total:		4701.71	Total:	6938.52
48	ORGANIC LIQUIDS	9.57		18.80	
	OILY SLUDGES	2.38		4.68	
	METAL-CONTAINING LIQUIDS	4.58		9.00	
	NON-METALLIC INORGANIC LIQUIDS	16.68		32.76	
	MISCELLANEOUS WASTES	8.34		0.00	
	Total:		41.55	Total:	65.24
49	WASTE OIL	19.31		22.84	
	HALOGENATED SOLVENTS	498.33		589.34	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-HALOGENATED SOLVENTS	2.70		3.20	
	ORGANIC LIQUIDS	3.06		3.62	
	DIOXINS	783.62		926.74	
	OILY SLUDGES	2.65		3.13	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.66		1.96	
	DYE & PAINT SLUDGES AND RESINS	0.11		0.13	
	METAL-CONTAINING LIQUIDS	2.63		3.11	
	NON-METALLIC INORGANIC LIQUIDS	5.54		6.56	
	SOIL	232.58		0.00	
	MISCELLANEOUS WASTES	69.04		0.00	
	Total:		1621.23	Total:	1560.63
50	HALOGENATED SOLVENTS	0.04		0.06	
	NON-HALOGENATED SOLVENTS	1.05		1.54	
	ORGANIC LIQUIDS	0.68		1.00	
	NON-METALLIC INORGANIC LIQUIDS	0.32		0.47	
	MISCELLANEOUS WASTES	0.40		0.58	
	Total:		2.49	Total:	3.65
53	NON-HALOGENATED SOLVENTS	1.34		1.92	
	Total:		1.34	Total:	1.92
55	WASTE OIL	32.34		46.44	
	NON-HALOGENATED SOLVENTS	17.17		24.66	
	OILY SLUDGES	7.49		10.76	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.40		3.45	
	MISCELLANEOUS WASTES	49.05		70.49	
	Total:		108.45	Total:	155.80
72	HALOGENATED SOLVENTS	6.84		5.32	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	20.85		16.22	
	Total:		27.69	Total:	21.54
73	WASTE OIL	210.37		459.76	
	HALOGENATED SOLVENTS	29.19		63.79	
	NON-HALOGENATED SOLVENTS	14.75		32.23	
	ORGANIC LIQUIDS	19.47		42.55	
	DIOXINS	13.80		30.16	
	OILY SLUDGES	3.32		7.25	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	16.85		36.83	
	METAL-CONTAINING LIQUIDS	518.34		1132.83	
	NON-METALLIC INORGANIC LIQUIDS	79.55		173.86	
	SOIL	89.33		0.00	
	MISCELLANEOUS WASTES	64.39		0.00	
	Total:		1059.36	Total:	1979.26
75	WASTE OIL	2.61		2.96	
	NON-HALOGENATED SOLVENTS	76.90		87.34	
	ORGANIC LIQUIDS	31.89		36.22	
	OILY SLUDGES	19.16		21.76	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.41		0.47	
	DYE & PAINT SLUDGES AND RESINS	27.72		31.48	
	SOIL	29.49		0.00	
	MISCELLANEOUS WASTES	13.24		15.04	
	Total:		201.42	Total:	195.27
76	NON-HALOGENATED SOLVENTS	1.10		1.25	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	DYE & PAINT SLUDGES AND RESINS	0.21		0.24	
	Total:		1.31	Total:	1.49
80	NON-HALOGENATED SOLVENTS	0.80		0.95	
	METAL-CONTAINING LIQUIDS	0.22		0.26	
	NON-METALLIC INORGANIC LIQUIDS	0.02		0.02	
	SOIL	18.54		0.00	
	MISCELLANEOUS WASTES	3.30		0.00	
	Total:		22.88	Total:	1.23
82	NON-HALOGENATED SOLVENTS	1.02		1.33	
	DIOXINS	12.63		16.50	
	MISCELLANEOUS WASTES	0.80		1.05	
	Total:		14.45	Total:	18.88
91	NON-HALOGENATED SOLVENTS	0.10		0.11	
	MISCELLANEOUS WASTES	2.79		0.00	
	Total:		2.89	Total:	0.11
92	WASTE OIL	1.25		1.40	
	NON-HALOGENATED SOLVENTS	0.45		0.50	
	PESTICIDES	0.07		0.08	
	DIOXINS	0.15		0.17	
	OILY SLUDGES	0.75		0.84	
	SOIL	63.20		0.00	
	MISCELLANEOUS WASTES	0.27		0.31	
	Total:		66.14	Total:	3.30
94	ORGANIC LIQUIDS	4.17		4.66	
	DYE & PAINT SLUDGES AND RESINS	0.00		0.00	
	SOIL	0.40		0.00	
	MISCELLANEOUS WASTES	0.54		0.60	
	Total:		5.11	Total:	5.26
95	PESTICIDES	1.14		1.27	
	Total:		1.14	Total:	1.27
99	NON-HALOGENATED SOLVENTS	3.16		3.16	
	SOIL	549.31		0.00	
	Total:		552.47	Total:	3.16

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN SAN
MATEO COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	3	3	2
Agriculture & Mining	0	0	0
Construction	65	58	39
Manufacturing	59,699	53,729	35,820
Transport, Communication, Utilities	9,588	8,629	5,753
Wholesale Trade	4	3	2
Retail Trade	144	130	86
Finance, Insurance, & Real Estate	*	*	*
Services	2,359	2,123	1,416
Government	10	9	6
TOTALS	71,872	64,685	43,123

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN SAN MATEO
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	34,107	30,696	20,464
Halogenated Solvents	1,089	980	653
Non-halogenated Solvents	16,422	14,780	9,853
Organic Liquids	525	473	315
Pesticides	3,893	3,504	2,336
Dioxins	1,077	969	646
Oily Sludges	2,737	2,463	1,642
Halogenated Organic Sludges & Solids	22	20	13
Non-halogenated Organic Sludges&Solids	1,746	1,572	1,048
Dye & Paint Sludges & Resins	1,715	1,544	1,029
Metal-Containing Sludges	11	10	7
Metal-Containing Liquids	1,833	1,650	1,100
Cyanide & Metal Liquids	7	6	4
Non-metallic Inorganic Liquids	1,153	1,038	692
Non-metallic Inorganic Sludges	2,680	2,412	1,608
Contaminated Soil	0	0	0
Miscellaneous Wastes	2,853	2,568	1,712
TOTALS	71,872	64,685	43,123

* = less than one ton, but greater than zero

9/1/88

COUNTY: SANTA CLARA

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	20	0.00		0.00	
	27	21.34		38.68	
	28	437.54		658.62	
	32	1.22		1.52	
	33	11.62		13.64	
	34	115.18		153.22	
	35	1507.25		3312.21	
	36	1780.12		2686.82	
	37	624.19		611.36	
	38	71.97		202.76	
	39	0.22		0.62	
	48	41.37		58.22	
	49	744.38		897.98	
	73	5.12		10.61	
	75	7.50		10.15	
	76	1.83		2.48	
	80	1.15		1.68	
	89	0.00		0.00	
	99	290.89		290.89	
		Total:	5662.89	Total:	8951.46
112	28	1.45		2.18	
	32	0.93		1.16	
	33	18.91		22.19	
	34	5.73		7.62	
	35	40.58		89.18	
	36	1607.34		2426.04	
	37	12.01		11.76	
	38	1.16		3.27	
	49	593.37		715.81	
	50	0.06		0.11	
	73	2.69		5.58	
	79	0.00		0.00	
	80	0.12		0.17	
	82	5.81		8.65	
	94	5.05		5.78	
	99	3.88		3.88	
		Total:	2299.09	Total:	3303.38
113	28	3.11		4.68	
	32	0.45		0.56	
	35	256.52		563.71	
	36	93.56		141.21	
	37	8.94		8.76	
	38	0.22		0.62	
	49	21.74		26.23	
	73	0.15		0.31	
	99	8.90		8.90	
		Total:	393.59	Total:	754.98

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
121	28	7.40		11.14	
	29	0.67		1.00	
	33	1.82		2.14	
	34	6.59		8.77	
	35	21.81		47.93	
	36	390.81		589.87	
	37	316.06		309.56	
	38	54.02		152.19	
	42	14.67		28.69	
	49	41.21		49.71	
	73	77.73		161.11	
	99	27.21		27.21	
		Total:	960.00	Total:	1389.32
122	20	0.00		0.00	
	28	327.92		493.61	
	29	0.22		0.33	
	32	0.22		0.27	
	34	6.29		8.37	
	35	417.38		917.20	
	36	37.14		56.06	
	37	0.45		0.44	
	38	0.24		0.68	
	49	3.15		3.80	
	51	1.83		3.30	
	73	1.89		3.92	
	76	0.43		0.58	
	79	0.00		0.00	
	80	2.91		4.24	
	82	0.66		0.98	
	99	0.68		0.68	
		Total:	801.41	Total:	1494.46
123	28	1333.37		2007.09	
	34	0.22		0.29	
	35	153.05		336.33	
	36	1308.00		1974.23	
	37	100.42		98.36	
	38	64.86		182.73	
	49	19.14		23.09	
	51	12.38		22.33	
	82	0.20		0.30	
	99	244.13		244.13	
		Total:	3235.77	Total:	4888.88
131	27	0.39		0.71	
	28	259.78		391.04	
	33	143.42		168.32	
	34	481.14		640.04	
	35	21.01		46.17	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	36	88.71		133.89	
	37	319.38		312.81	
	38	1.88		5.30	
	42	16.68		32.62	
	49	36.42		43.94	
	73	0.91		1.89	
	80	0.02		0.03	
	99	35.07		35.07	
		Total:	1404.81	Total:	1811.83
132	27	0.56		1.01	
	28	1246.00		1875.57	
	33	4.12		4.84	
	34	29.14		38.76	
	35	121.34		266.65	
	36	2367.89		3573.97	
	37	98.75		96.72	
	38	2.79		7.86	
	49	2951.34		3560.33	
	50	0.01		0.02	
	73	1.09		2.26	
	80	1.14		1.66	
	99	662.58		662.58	
		Total:	7486.75	Total:	10092.23
133	37	190.67		186.75	
	38	0.22		0.62	
	49	16.84		20.31	
	73	14.17		29.37	
	94	0.75		0.86	
		Total:	222.65	Total:	237.91
134	28	71.47		107.58	
	34	6.07		8.07	
	35	7482.94		16443.90	
	36	246.02		371.33	
	37	78.25		76.64	
	38	0.12		0.34	
	42	60.46		118.23	
	55	8.00		10.96	
	57	0.05		0.07	
	99	4.16		4.16	
		Total:	7957.54	Total:	17141.28
135	20	124.15		87.06	
	28	38.42		57.83	
	33	9.59		11.26	
	35	40.49		88.98	
	36	93.44		141.03	
	37	18.40		18.02	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	38	1.12		3.16	
	49	16.89		20.38	
	50	0.40		0.72	
	73	1.60		3.32	
	99	0.47		0.47	
		Total:	344.97	Total:	432.23
141	20	0.00		0.00	
	28	91.60		137.88	
	34	2.88		3.83	
	35	2.54		5.58	
	36	11.19		16.89	
	37	3.89		3.81	
	38	0.00		0.00	
	49	0.64		0.77	
	73	0.34		0.70	
	80	0.01		0.01	
	82	0.00		0.00	
	99	0.10		0.10	
		Total:	113.19	Total:	169.57
151	15	1.89		0.00	
	28	90.11		0.00	
	29	25.19		0.00	
	32	1.26		0.00	
	34	5.05		0.00	
	35	27.17		0.00	
	36	3.99		0.00	
	37	76.99		0.00	
	38	0.10		0.00	
	48	111.97		0.00	
	49	33.85		0.00	
	50	25.28		0.00	
	73	101.15		0.00	
	76	0.25		0.00	
	80	68.90		0.00	
	82	69.03		0.00	
	84	1.68		0.00	
	91	7.79		0.00	
	97	2.68		0.00	
	99	3.99		0.00	
		Total:	658.32	Total:	0.00
162	49	12.64		15.25	
		Total:	12.64	Total:	15.25
171	27	68.97		125.00	
	28	80.71		121.49	
	34	77.56		103.18	
	35	2215.70		4869.04	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	36	532.27		803.38	
	37	1036.56		1015.25	
	38	43.81		123.43	
	39	1.40		3.94	
	73	0.12		0.25	
	99	142.93		142.93	
		Total:	4200.03	Total:	7307.89
172	28	0.75		1.13	
	33	0.40		0.47	
	34	2.00		2.66	
	35	1.63		3.58	
	36	18.67		28.18	
	37	23.00		22.53	
	99	12.64		12.64	
		Total:	59.09	Total:	71.19
181	17	201.34		242.43	
	28	205.16		308.82	
	29	1.95		2.92	
	32	6.71		8.38	
	33	161.98		190.11	
	34	53.84		71.62	
	35	386.51		849.36	
	36	749.38		1131.08	
	37	168.08		164.62	
	38	17.95		50.57	
	39	1.80		5.07	
	49	1000.33		1206.74	
	50	316.64		571.18	
	57	0.40		0.55	
	73	28.86		59.82	
	75	4.58		6.20	
	79	101.22		146.04	
	82	3.76		5.60	
	91	6.53		7.44	
	99	99.22		99.22	
		Total:	3516.24	Total:	5127.77
211	16	1.41		1.70	
	17	0.69		0.83	
	26	5.68		9.52	
	27	4.43		8.03	
	28	76.37		114.96	
	30	0.20		0.25	
	32	2.78		3.47	
	33	7.11		8.34	
	34	21.29		28.32	
	35	1184.54		2603.05	
	36	245.67		370.80	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		37	84.64	82.90	
		38	35.35	99.59	
		39	0.89	2.51	
		48	2.54	3.57	
		49	28.58	34.48	
		50	3.35	6.04	
		51	229.15	413.36	
		55	1.11	1.52	
		73	114.76	237.86	
		75	1.33	1.80	
		76	15.41	20.86	
		80	2.37	3.45	
		82	1.76	2.62	
		96	0.40	0.46	
		97	0.16	0.18	
		99	8.62	8.62	
		Total:	2080.59	Total:	4069.09
212	17	0.90		1.08	
	20	0.67		0.47	
	25	2.49		4.17	
	27	0.44		0.80	
	28	133.73		201.30	
	29	2.29		3.43	
	32	5.27		6.58	
	33	14.33		16.82	
	34	12.36		16.44	
	35	1626.76		3574.83	
	36	409.76		618.47	
	37	21.21		20.77	
	38	21.51		60.60	
	43	0.22		0.25	
	45	1.37		3.31	
	48	0.30		0.42	
	49	13.52		16.31	
	50	2.50		4.51	
	51	43.78		78.97	
	55	1.56		2.14	
	73	5.09		10.55	
	75	4.33		5.86	
	80	0.37		0.54	
	82	2.89		4.30	
	91	7.47		8.51	
	99	21.30		21.30	
		Total:	2356.42	Total:	4682.73
213	25	2.29		3.84	
	26	4.17		6.99	
	27	2.50		4.53	
	28	15.82		23.81	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	34	1.35		1.80	
	35	177.37		389.77	
	36	18.99		28.66	
	37	57.28		56.10	
	38	0.86		2.42	
	49	22.21		26.79	
	55	104.49		143.09	
	73	2535.18		5254.69	
	75	1.38		1.87	
	76	366.11		495.66	
	80	0.11		0.16	
	82	1.36		2.02	
	91	0.04		0.05	
	99	0.12		0.12	
		Total:	3311.63	Total:	6442.37
214	15	4.04		4.86	
	17	2.24		2.70	
	20	0.72		0.50	
	24	1.55		2.60	
	25	0.90		1.51	
	26	103.49		173.51	
	27	58.17		105.43	
	28	230.16		346.45	
	29	2.04		3.05	
	30	1.13		1.39	
	32	10.76		13.44	
	33	25.33		29.73	
	34	68.42		91.02	
	35	1912.26		4202.23	
	36	1362.25		2056.11	
	37	25.18		24.66	
	38	42.88		120.81	
	39	0.22		0.62	
	43	0.22		0.25	
	44	0.22		0.53	
	45	0.22		0.53	
	48	0.67		0.94	
	49	1616.42		1949.96	
	50	1.47		2.65	
	51	15.12		27.27	
	52	0.38		0.52	
	55	51.59		70.65	
	57	1.43		1.96	
	67	0.80		1.27	
	72	0.63		0.85	
	73	257.94		534.63	
	75	63.53		86.01	
	76	24.91		33.72	
	80	1.53		2.23	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	82	12.02		17.89	
	86	0.90		1.34	
	91	26.01		29.64	
	97	48.69		55.48	
	99	44.51		44.51	
		Total:	6020.95	Total:	10043.45
221	15	2.08		2.50	
	17	24.53		29.54	
	20	1.14		0.80	
	26	5.91		9.91	
	27	2.29		4.15	
	28	190.87		287.31	
	29	4520.53		6766.22	
	30	2.24		2.76	
	33	89.78		105.37	
	34	9.40		12.50	
	35	329.99		725.16	
	36	111.63		168.49	
	37	1852.68		1814.59	
	38	16.48		46.43	
	42	18.17		35.53	
	48	10.42		14.66	
	49	3228.05		3894.14	
	50	1.80		3.25	
	55	7.50		10.27	
	57	0.25		0.34	
	67	1.35		2.15	
	73	96.05		199.08	
	75	3.33		4.51	
	76	8.34		11.29	
	80	0.22		0.32	
	82	33.73		50.20	
	89	13.65		28.29	
	91	39.45		44.95	
	92	0.44		0.50	
	94	0.20		0.23	
	97	23.01		26.22	
	99	43.68		43.68	
		Total:	10689.19	Total:	14345.34
222	27	10.32		18.70	
	28	9.64		14.51	
	29	44.29		66.29	
	34	280.97		373.76	
	35	13.93		30.61	
	36	42.51		64.16	
	37	9.17		8.98	
	38	6.13		17.27	
	42	2.08		4.07	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	48	0.22		0.31	
	49	196.86		237.48	
	55	36.27		49.67	
	73	25.65		53.17	
	75	8.52		11.53	
	82	6.25		9.30	
	91	34.95		39.83	
	99	4.67		4.67	
		Total:	732.43	Total:	1004.31
223	27	5.00		9.06	
	28	18.25		27.47	
	34	0.45		0.60	
	35	13.19		28.99	
	36	20.06		30.28	
	37	34.03		33.33	
	38	18.09		50.97	
	49	226.33		273.03	
	50	3.64		6.57	
	55	0.91		1.25	
	73	8.78		18.20	
	75	0.91		1.23	
	91	12.87		14.67	
		Total:	362.51	Total:	495.65
231	35	0.08		0.18	
		Total:	0.08	Total:	0.18
232	20	8.19		5.74	
	28	0.96		1.45	
	49	10.28		12.40	
	51	2.98		5.38	
	73	0.02		0.04	
	91	0.49		0.56	
		Total:	22.92	Total:	25.57
241	27	6.67		12.09	
	28	69.89		105.20	
	29	24.18		36.19	
	33	19.59		22.99	
	34	35.81		47.64	
	35	100.42		220.67	
	36	46.41		70.05	
	37	16.86		16.51	
	38	68.07		191.78	
	46	80.93		195.70	
	49	27.10		32.69	
	50	20.88		37.67	
	51	13.13		23.68	
	55	18.11		24.80	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	73	6.84		14.18	
	82	3.54		5.27	
	91	19.29		21.98	
	99	22.86		22.86	
		Total:	600.58	Total:	1101.95
251	36	1.25		1.89	
	51	40.18		72.48	
	91	10.42		11.87	
		Total:	51.85	Total:	86.24
252	49	18.76		22.63	
	73	0.68		1.41	
	92	1.10		1.25	
		Total:	20.54	Total:	25.29
261	27	0.03		0.05	
	28	6.59		9.92	
	33	5.89		6.91	
	35	8.22		18.06	
	36	12.48		18.84	
	37	61.77		60.50	
	38	0.48		1.35	
	49	193.85		233.85	
	73	31.63		65.56	
	76	199.52		270.12	
	82	19.75		29.39	
	97	2.24		2.55	
		Total:	542.45	Total:	717.10
271	36	0.56		0.85	
	37	31.17		30.53	
	99	0.68		0.68	
		Total:	32.41	Total:	32.06
272	28	45.82		68.97	
	32	0.22		0.27	
	34	0.66		0.88	
	35	12.38		27.21	
	36	1.27		1.92	
	37	0.67		0.66	
	38	0.00		0.00	
	48	1.22		1.72	
	49	34.35		41.44	
	73	0.14		0.29	
	99	26.30		26.30	
		Total:	123.03	Total:	169.66
281	35	1.44		3.16	
	36	1.20		1.81	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	37	0.64		0.63	
	49	0.79		0.95	
	97	0.31		0.35	
	Total:		4.38	Total:	6.90
291	36	0.22		0.33	
	37	0.90		0.88	
	49	58.89		71.04	
	82	1.35		2.01	
	97	4.16		4.74	
	Total:		65.52	Total:	79.00
311	28	50.56		76.11	
	32	0.00		0.00	
	38	3.62		10.20	
	49	0.22		0.27	
	73	7.70		15.96	
	80	0.08		0.12	
	94	0.84		0.96	
	Total:		63.02	Total:	103.62
321	91	16.00		18.23	
	Total:		16.00	Total:	18.23
322	37	0.91		0.89	
	38	1.67		4.70	
	80	1.44		2.10	
	82	0.20		0.30	
	Total:		4.22	Total:	7.99
331	28	4.55		6.85	
	29	0.01		0.01	
	32	0.31		0.39	
	34	0.40		0.53	
	35	5.29		11.62	
	36	3.22		4.86	
	37	84.25		82.52	
	38	0.92		2.59	
	49	25.82		31.15	
	73	0.67		1.39	
	79	0.14		0.20	
	Total:		125.58	Total:	142.11
341	35	96.23		211.47	
	36	30.91		46.65	
	38	1.14		3.21	
	73	2.71		5.62	
	94	0.27		0.31	
	Total:		131.26	Total:	267.26

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
342	35	3.35		7.36	
	36	13.56		20.47	
	37	3.89		3.81	
		Total:	20.80	Total:	31.64
343	27	3.66		6.63	
	28	139.19		209.52	
	29	32.10		48.05	
	34	1.33		1.77	
	35	210.99		463.65	
	36	37.51		56.62	
	37	41.15		40.30	
	38	5.09		14.34	
	43	0.22		0.25	
	48	3.34		4.70	
	49	30.42		36.70	
	55	0.20		0.27	
	73	24.47		50.72	
	79	0.05		0.07	
	82	1.06		1.58	
	99	7.15		7.15	
		Total:	537.93	Total:	942.32
351	28	0.20		0.30	
	35	0.10		0.22	
	36	28.94		43.68	
	37	2.87		2.81	
	49	283.19		341.62	
	67	0.30		0.48	
	73	0.85		1.76	
	99	7.66		7.66	
		Total:	324.11	Total:	398.53
352	17	3.21		3.87	
	20	0.60		0.42	
	25	0.22		0.37	
	27	66.90		121.25	
	28	227.00		341.70	
	32	0.40		0.50	
	34	14.31		19.04	
	35	1856.43		4079.54	
	36	173.71		262.19	
	37	3.48		3.41	
	38	12.74		35.89	
	42	1.20		2.35	
	43	0.22		0.25	
	45	1.65		3.99	
	46	8.42		20.36	
	48	0.50		0.70	
	49	1294.15		1561.19	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	50	1.75		3.16	
	57	1.20		1.64	
	73	14.79		30.66	
	76	7.15		9.68	
	79	5.85		8.44	
	80	0.10		0.15	
	82	23.89		35.55	
	94	5.98		6.84	
	97	2.75		3.13	
	99	12.87		12.87	
		Total:	3741.47	Total:	6569.14
411	36	3.39		5.12	
		Total:	3.39	Total:	5.12
421	36	38.64		58.32	
	49	14.59		17.60	
		Total:	53.23	Total:	75.92
441	36	1.83		2.76	
		Total:	1.83	Total:	2.76
451	35	2.12		4.66	
	36	3.71		5.60	
	37	0.22		0.22	
	38	3.73		10.51	
	48	0.48		0.68	
	49	0.00		0.00	
	55	7.08		9.70	
	75	6.66		9.02	
	76	0.41		0.56	
	91	4.17		4.75	
	99	0.26		0.26	
		Total:	28.84	Total:	45.96
461	15	2.50		3.01	
	17	11.78		14.18	
	28	298.74		449.69	
	32	0.22		0.27	
	34	219.46		291.94	
	35	30.76		67.60	
	36	7.67		11.58	
	37	809.22		792.58	
	38	25.48		71.79	
	49	2.20		2.65	
	73	4.81		9.97	
	80	2.38		3.47	
	82	0.12		0.18	
	99	0.87		0.87	
		Total:	1416.21	Total:	1719.78

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
471	28	3.00		4.52	
	99	37.98		37.98	
		Total:	40.98	Total:	42.50
491	27	20.83		37.75	
	28	43.46		65.42	
	32	4.94		6.17	
	34	3.90		5.19	
	35	570.93		1254.63	
	36	238.62		360.16	
	37	131.56		128.86	
	42	17.09		33.42	
	49	8.34		10.06	
	50	4.58		8.26	
	73	3.46		7.17	
	76	5.02		6.80	
	91	22.93		26.13	
	99	51.34		51.34	
		Total:	1127.00	Total:	2001.36
511	28	5.56		8.37	
	35	0.06		0.13	
	49	8.42		10.16	
	79	0.60		0.87	
	91	0.30		0.34	
		Total:	14.94	Total:	19.87
512	20	9.90		6.94	
	27	5.05		9.15	
	28	202.33		304.56	
	29	8.34		12.48	
	34	3.37		4.48	
	35	393.63		865.01	
	36	247.25		373.19	
	37	122.10		119.59	
	38	6.20		17.47	
	43	0.09		0.10	
	48	2.57		3.62	
	49	123.61		149.12	
	55	5.89		8.07	
	67	0.35		0.56	
	73	100.71		208.74	
	75	0.06		0.08	
	79	0.09		0.13	
	82	1.90		2.83	
	91	1.65		1.88	
	99	0.17		0.17	
		Total:	1235.26	Total:	2088.17
513	20	0.02		0.01	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	28	16.05		24.16	
	34	188.75		251.09	
	35	40.33		88.63	
	36	413.25		623.74	
	37	88.72		86.90	
	38	0.88		2.48	
	49	219.03		264.23	
	73	0.14		0.29	
	79	0.50		0.72	
	80	0.27		0.39	
	82	3.33		4.96	
	91	0.32		0.36	
	94	0.96		1.10	
	97	2.52		2.87	
	99	0.02		0.02	
		Total:	975.09	Total:	1351.95
521	35	14.82		32.57	
	36	1037.17		1565.45	
	99	13.31		13.31	
		Total:	1065.30	Total:	1611.33
541	27	3.62		6.56	
	28	8.10		12.19	
	35	17.27		37.95	
	36	9.61		14.50	
	37	0.41		0.40	
	38	41.26		116.24	
	42	0.44		0.86	
	48	0.22		0.31	
	49	42.15		50.85	
	57	0.62		0.85	
	73	272.28		564.36	
	94	0.15		0.17	
	99	1.42		1.42	
		Total:	397.55	Total:	806.66
551	20	1.55		1.09	
	28	262.07		394.49	
	29	5.66		8.47	
	32	0.10		0.12	
	33	1.49		1.75	
	34	1.10		1.46	
	35	161.04		353.89	
	36	78.19		118.02	
	37	50.87		49.82	
	38	17.63		49.67	
	49	19.99		24.11	
	57	0.41		0.56	
	73	103.29		214.09	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	76	0.15		0.20	
	79	0.10		0.14	
	80	3.73		5.43	
	82	31.85		47.40	
	91	0.07		0.08	
	94	0.69		0.79	
	97	0.05		0.06	
	99	6.69		6.69	
		Total:	746.72	Total:	1278.33
561	28	0.15		0.23	
	35	0.01		0.02	
	36	0.22		0.33	
	72	8.34		11.29	
	73	2.08		4.31	
	91	0.05		0.06	
	99	59.12		59.12	
		Total:	69.97	Total:	75.36
571	36	0.00		0.00	
	37	37.91		37.13	
	49	452.01		545.28	
		Total:	489.92	Total:	582.41
581	35	10.10		22.19	
	36	3.00		4.53	
		Total:	13.10	Total:	26.72
591	28	10.32		15.53	
		Total:	10.32	Total:	15.53
611	28	679.45		0.00	
	29	13.04		0.00	
	32	60.67		0.00	
	33	226.67		0.00	
	35	718.48		0.00	
	36	411.56		0.00	
	37	931.74		0.00	
	38	6.77		0.00	
	42	0.84		0.00	
	49	63.92		0.00	
	50	371.57		0.00	
	51	1.20		0.00	
	55	257.64		0.00	
	73	96.71		0.00	
	82	0.60		0.00	
	83	1.10		0.00	
	91	6.47		0.00	
	94	0.25		0.00	
		Total:	3848.68	Total:	0.00

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
612	49	29.35		35.41	
	73	6.17		12.79	
	79	0.09		0.13	
	91	12.20		13.90	
		Total:	47.81	Total:	62.23
711	33	0.45		0.53	
	34	10.33		13.74	
	35	7.66		16.83	
	36	0.89		1.34	
	37	16.73		16.39	
	38	0.44		1.24	
	82	0.04		0.06	
		Total:	36.54	Total:	50.13
721	28	14.89		22.41	
	35	54.78		120.38	
	36	7.82		11.80	
		Total:	77.49	Total:	154.59
722	37	38.50		37.71	
		Total:	38.50	Total:	37.71
723	35	0.02		0.04	
	37	104.61		102.46	
	73	1.14		2.36	
		Total:	105.77	Total:	104.86
724	28	0.22		0.33	
		Total:	0.22	Total:	0.33
725	38	0.04		0.11	
	80	0.02		0.03	
		Total:	0.06	Total:	0.14
726	35	0.44		0.97	
		Total:	0.44	Total:	0.97
731	33	3.98		4.67	
	36	10.95		16.53	
	49	110.15		132.88	
	73	1.39		2.88	
		Total:	126.47	Total:	156.96
741	36	3.15		4.75	
	37	3.75		3.67	
		Total:	6.90	Total:	8.42
751	36	10.48		15.82	
	37	5.05		4.95	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	73	3.08		6.38	
		Total:	18.61	Total:	27.15
791	35	0.22		0.48	
	36	0.07		0.11	
	37	165.42		162.02	
	38	0.02		0.06	
		Total:	165.73	Total:	162.67
			-----		-----
		Total:	83473.72	Total:	127513.25

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	10689.19		14345.34	
	223	362.51		495.65	
		Total:	11051.70	Total:	14840.99
HALOGENATED SOLVENTS	211	2080.59		4069.09	
	741	6.90		8.42	
		Total:	2087.49	Total:	4077.51
NON-HALOGENATED SOLVENTS	212	2356.42		4682.73	
	213	3311.63		6442.37	
	214	6020.95		10043.45	
		Total:	11689.00	Total:	21168.55
ORGANIC LIQUIDS	133	222.65		237.91	
	134	7957.54		17141.28	
	341	131.26		267.26	
	342	20.80		31.64	
	343	537.93		942.32	
		Total:	8870.18	Total:	18620.41
PESTICIDES	231	0.08		0.18	
	232	22.92		25.57	
		Total:	23.00	Total:	25.75
DIOXINS	261	542.45		717.10	
	731	126.47		156.96	
		Total:	668.92	Total:	874.06
OILY SLUDGES	222	732.43		1004.31	
	352	3741.47		6569.14	
		Total:	4473.90	Total:	7573.45
HALOGENATED ORGANIC SLUDGES & SOLIDS	251	51.85		86.24	
	351	324.11		398.53	
	451	28.84		45.96	
	751	18.61		27.15	
		Total:	423.41	Total:	557.88
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	600.58		1101.95	
	252	20.54		25.29	
	321	16.00		18.23	
	471	40.98		42.50	
	491	1127.00		2001.36	
	571	489.92		582.41	
		Total:	2295.02	Total:	3771.74
DYE & PAINT SLUDGES AND RESINS	271	32.41		32.06	
	272	123.03		169.66	
	281	4.38		6.90	
	291	65.52		79.00	

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	461	1416.21		1719.78	
		Total:	1641.55	Total:	2007.40
METAL-CONTAINING SLUDGES	171	4200.03		7307.89	
		Total:	4200.03	Total:	7307.89
METAL-CONTAINING LIQUIDS	111	5662.89		8951.46	
	121	960.00		1389.32	
	132	7486.75		10092.23	
	721	77.49		154.59	
	722	38.50		37.71	
	723	105.77		104.86	
	724	0.22		0.33	
	725	0.06		0.14	
	726	0.44		0.97	
		Total:	14332.12	Total:	20731.61
CYANIDE & METAL LIQUIDS	711	36.54		50.13	
		Total:	36.54	Total:	50.13
NON-METALLIC INORGANIC LIQUIDS	112	2299.09		3303.38	
	113	393.59		754.98	
	122	801.41		1494.46	
	123	3235.77		4888.88	
	131	1404.81		1811.83	
	135	344.97		432.23	
	791	165.73		162.67	
		Total:	8645.37	Total:	12848.43
NON-METALLIC INORGANIC SLUDGES	411	3.39		5.12	
	421	53.23		75.92	
	441	1.83		2.76	
	521	1065.30		1611.33	
		Total:	1123.75	Total:	1695.13
SOIL	611	3848.68		0.00	
		Total:	3848.68	Total:	0.00
MISCELLANEOUS WASTES	141	113.19		169.57	
	151	658.32		0.00	
	162	12.64		15.25	
	172	59.09		71.19	
	181	3516.24		5127.77	
	311	63.02		103.62	
	322	4.22		7.99	
	331	125.58		142.11	
	511	14.94		19.87	
	512	1235.26		2088.17	
	513	975.09		1351.95	
	541	397.55		806.66	

COUNTY: SANTA CLARA

SORT: By waste group

Page: 3

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	551	746.72		1278.33	
	561	69.97		75.36	
	581	13.10		26.72	
	591	10.32		15.53	
	612	47.81		62.23	
		Total:	8063.06	Total:	11362.32

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
15	151	1.89		0.00	
	214	4.04		4.86	
	221	2.08		2.50	
	461	2.50		3.01	
	Total:		10.51	Total:	10.37
16	211	1.41		1.70	
	Total:		1.41	Total:	1.70
17	181	201.34		242.43	
	211	0.69		0.83	
	212	0.90		1.08	
	214	2.24		2.70	
	221	24.53		29.54	
	352	3.21		3.87	
	461	11.78		14.18	
	Total:		244.69	Total:	294.63
20	111	0.00		0.00	
	122	0.00		0.00	
	135	124.15		87.06	
	141	0.00		0.00	
	212	0.67		0.47	
	214	0.72		0.50	
	221	1.14		0.80	
	232	8.19		5.74	
	352	0.60		0.42	
	512	9.90		6.94	
	513	0.02		0.01	
	551	1.55		1.09	
	Total:		146.94	Total:	103.03
24	214	1.55		2.60	
	Total:		1.55	Total:	2.60
25	212	2.49		4.17	
	213	2.29		3.84	
	214	0.90		1.51	
	352	0.22		0.37	
	Total:		5.90	Total:	9.89
26	211	5.68		9.52	
	213	4.17		6.99	
	214	103.49		173.51	
	221	5.91		9.91	
	Total:		119.25	Total:	199.93
27	111	21.34		38.68	
	131	0.39		0.71	
	132	0.56		1.01	
	171	68.97		125.00	
	211	4.43		8.03	
	212	0.44		0.80	
	213	2.50		4.53	
	214	58.17		105.43	
	221	2.29		4.15	
	222	10.32		18.70	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	223	5.00		9.06	
	241	6.67		12.09	
	261	0.03		0.05	
	343	3.66		6.63	
	352	66.90		121.25	
	491	20.83		37.75	
	512	5.05		9.15	
	541	3.62		6.56	
		Total:	281.17	Total:	509.58
28	111	437.54		658.62	
	112	1.45		2.18	
	113	3.11		4.68	
	121	7.40		11.14	
	122	327.92		493.61	
	123	1333.37		2007.09	
	131	259.78		391.04	
	132	1246.00		1875.57	
	134	71.47		107.58	
	135	38.42		57.83	
	141	91.60		137.88	
	151	90.11		0.00	
	171	80.71		121.49	
	172	0.75		1.13	
	181	205.16		308.82	
	211	76.37		114.96	
	212	133.73		201.30	
	213	15.82		23.81	
	214	230.16		346.45	
	221	190.87		287.31	
	222	9.64		14.51	
	223	18.25		27.47	
	232	0.96		1.45	
	241	69.89		105.20	
	261	6.59		9.92	
	272	45.82		68.97	
	311	50.56		76.11	
	331	4.55		6.85	
	343	139.19		209.52	
	351	0.20		0.30	
	352	227.00		341.70	
	461	298.74		449.69	
	471	3.00		4.52	
	491	43.46		65.42	
	511	5.56		8.37	
	512	202.33		304.56	
	513	16.05		24.16	
	541	8.10		12.19	
	551	262.07		394.49	
	561	0.15		0.23	
	591	10.32		15.53	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	611	679.45		0.00	
	721	14.89		22.41	
	724	0.22		0.33	
	Total:		6958.73	Total:	9316.39
29	121	0.67		1.00	
	122	0.22		0.33	
	151	25.19		0.00	
	181	1.95		2.92	
	212	2.29		3.43	
	214	2.04		3.05	
	221	4520.53		6766.22	
	222	44.29		66.29	
	241	24.18		36.19	
	331	0.01		0.01	
	343	32.10		48.05	
	512	8.34		12.48	
	551	5.66		8.47	
	611	13.04		0.00	
	Total:		4680.51	Total:	6948.44
30	211	0.20		0.25	
	214	1.13		1.39	
	221	2.24		2.76	
	Total:		3.57	Total:	4.40
32	111	1.22		1.52	
	112	0.93		1.16	
	113	0.45		0.56	
	122	0.22		0.27	
	151	1.26		0.00	
	181	6.71		8.38	
	211	2.78		3.47	
	212	5.27		6.58	
	214	10.76		13.44	
	272	0.22		0.27	
	311	0.00		0.00	
	331	0.31		0.39	
	352	0.40		0.50	
	461	0.22		0.27	
	491	4.94		6.17	
	551	0.10		0.12	
	611	60.67		0.00	
	Total:		96.46	Total:	43.10
33	111	11.62		13.64	
	112	18.91		22.19	
	121	1.82		2.14	
	131	143.42		168.32	
	132	4.12		4.84	
	135	9.59		11.26	
	172	0.40		0.47	
	181	161.98		190.11	
	211	7.11		8.34	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	212	14.33		16.82	
	214	25.33		29.73	
	221	89.78		105.37	
	241	19.59		22.99	
	261	5.89		6.91	
	551	1.49		1.75	
	611	226.67		0.00	
	711	0.45		0.53	
	731	3.98		4.67	
	Total:		746.48	Total:	610.08
34	111	115.18		153.22	
	112	5.73		7.62	
	121	6.59		8.77	
	122	6.29		8.37	
	123	0.22		0.29	
	131	481.14		640.04	
	132	29.14		38.76	
	134	6.07		8.07	
	141	2.88		3.83	
	151	5.05		0.00	
	171	77.56		103.18	
	172	2.00		2.66	
	181	53.84		71.62	
	211	21.29		28.32	
	212	12.36		16.44	
	213	1.35		1.80	
	214	68.42		91.02	
	221	9.40		12.50	
	222	280.97		373.76	
	223	0.45		0.60	
	241	35.81		47.64	
	272	0.66		0.88	
	331	0.40		0.53	
	343	1.33		1.77	
	352	14.31		19.04	
	461	219.46		291.94	
	491	3.90		5.19	
	512	3.37		4.48	
	513	188.75		251.09	
	551	1.10		1.46	
	711	10.33		13.74	
	Total:		1665.35	Total:	2208.63
35	111	1507.25		3312.21	
	112	40.58		89.18	
	113	256.52		563.71	
	121	21.81		47.93	
	122	417.38		917.20	
	123	153.05		336.33	
	131	21.01		46.17	
	132	121.34		266.65	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	134	7482.94		16443.90	
	135	40.49		88.98	
	141	2.54		5.58	
	151	27.17		0.00	
	171	2215.70		4869.04	
	172	1.63		3.58	
	181	386.51		849.36	
	211	1184.54		2603.05	
	212	1626.76		3574.83	
	213	177.37		389.77	
	214	1912.26		4202.23	
	221	329.99		725.16	
	222	13.93		30.61	
	223	13.19		28.99	
	231	0.08		0.18	
	241	100.42		220.67	
	261	8.22		18.06	
	272	12.38		27.21	
	281	1.44		3.16	
	331	5.29		11.62	
	341	96.23		211.47	
	342	3.35		7.36	
	343	210.99		463.65	
	351	0.10		0.22	
	352	1856.43		4079.54	
	451	2.12		4.66	
	461	30.76		67.60	
	491	570.93		1254.63	
	511	0.06		0.13	
	512	393.63		865.01	
	513	40.33		88.63	
	521	14.82		32.57	
	541	17.27		37.95	
	551	161.04		353.89	
	561	0.01		0.02	
	581	10.10		22.19	
	611	718.48		0.00	
	711	7.66		16.83	
	721	54.78		120.38	
	723	0.02		0.04	
	726	0.44		0.97	
	791	0.22		0.48	
		Total:	22271.56	Total:	47303.58
36	111	1780.12		2686.82	
	112	1607.34		2426.04	
	113	93.56		141.21	
	121	390.81		589.87	
	122	37.14		56.06	
	123	1308.00		1974.23	
	131	88.71		133.89	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	132	2367.89		3573.97	
	134	246.02		371.33	
	135	93.44		141.03	
	141	11.19		16.89	
	151	3.99		0.00	
	171	532.27		803.38	
	172	18.67		28.18	
	181	749.38		1131.08	
	211	245.67		370.80	
	212	409.76		618.47	
	213	18.99		28.66	
	214	1362.25		2056.11	
	221	111.63		168.49	
	222	42.51		64.16	
	223	20.06		30.28	
	241	46.41		70.05	
	251	1.25		1.89	
	261	12.48		18.84	
	271	0.56		0.85	
	272	1.27		1.92	
	281	1.20		1.81	
	291	0.22		0.33	
	331	3.22		4.86	
	341	30.91		46.65	
	342	13.56		20.47	
	343	37.51		56.62	
	351	28.94		43.68	
	352	173.71		262.19	
	411	3.39		5.12	
	421	38.64		58.32	
	441	1.83		2.76	
	451	3.71		5.60	
	461	7.67		11.58	
	491	238.62		360.16	
	512	247.25		373.19	
	513	413.25		623.74	
	521	1037.17		1565.45	
	541	9.61		14.50	
	551	78.19		118.02	
	561	0.22		0.33	
	571	0.00		0.00	
	581	3.00		4.53	
	611	411.56		0.00	
	711	0.89		1.34	
	721	7.82		11.80	
	731	10.95		16.53	
	741	3.15		4.75	
	751	10.48		15.82	
	791	0.07		0.11	
	Total:	14418.11		Total:	21134.76

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
37	111	624.19		611.36	
	112	12.01		11.76	
	113	8.94		8.76	
	121	316.06		309.56	
	122	0.45		0.44	
	123	100.42		98.36	
	131	319.38		312.81	
	132	98.75		96.72	
	133	190.67		186.75	
	134	78.25		76.64	
	135	18.40		18.02	
	141	3.89		3.81	
	151	76.99		0.00	
	171	1036.56		1015.25	
	172	23.00		22.53	
	181	168.08		164.62	
	211	84.64		82.90	
	212	21.21		20.77	
	213	57.28		56.10	
	214	25.18		24.66	
	221	1852.68		1814.59	
	222	9.17		8.98	
	223	34.03		33.33	
	241	16.86		16.51	
	261	61.77		60.50	
	271	31.17		30.53	
	272	0.67		0.66	
	281	0.64		0.63	
	291	0.90		0.88	
	322	0.91		0.89	
	331	84.25		82.52	
	342	3.89		3.81	
	343	41.15		40.30	
	351	2.87		2.81	
	352	3.48		3.41	
	451	0.22		0.22	
	461	809.22		792.58	
	491	131.56		128.86	
	512	122.10		119.59	
	513	88.72		86.90	
	541	0.41		0.40	
	551	50.87		49.82	
	571	37.91		37.13	
	611	931.74		0.00	
	711	16.73		16.39	
	722	38.50		37.71	
	723	104.61		102.46	
	741	3.75		3.67	
	751	5.05		4.95	
	791	165.42		162.02	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	7915.60	Total:	6764.87
38	111	71.97		202.76	
	112	1.16		3.27	
	113	0.22		0.62	
	121	54.02		152.19	
	122	0.24		0.68	
	123	64.86		182.73	
	131	1.88		5.30	
	132	2.79		7.86	
	133	0.22		0.62	
	134	0.12		0.34	
	135	1.12		3.16	
	141	0.00		0.00	
	151	0.10		0.00	
	171	43.81		123.43	
	181	17.95		50.57	
	211	35.35		99.59	
	212	21.51		60.60	
	213	0.86		2.42	
	214	42.88		120.81	
	221	16.48		46.43	
	222	6.13		17.27	
	223	18.09		50.97	
	241	68.07		191.78	
	261	0.48		1.35	
	272	0.00		0.00	
	311	3.62		10.20	
	322	1.67		4.70	
	331	0.92		2.59	
	341	1.14		3.21	
	343	5.09		14.34	
	352	12.74		35.89	
	451	3.73		10.51	
	461	25.48		71.79	
	512	6.20		17.47	
	513	0.88		2.48	
	541	41.26		116.24	
	551	17.63		49.67	
	611	6.77		0.00	
	711	0.44		1.24	
	725	0.04		0.11	
	791	0.02		0.06	
		Total:	597.94	Total:	1665.25
39	111	0.22		0.62	
	171	1.40		3.94	
	181	1.80		5.07	
	211	0.89		2.51	
	214	0.22		0.62	
		Total:	4.53	Total:	12.76
42	121	14.67		28.69	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	131	16.68		32.62	
	134	60.46		118.23	
	221	18.17		35.53	
	222	2.08		4.07	
	352	1.20		2.35	
	491	17.09		33.42	
	541	0.44		0.86	
	611	0.84		0.00	
	Total:		131.63	Total:	255.77
43	212	0.22		0.25	
	214	0.22		0.25	
	343	0.22		0.25	
	352	0.22		0.25	
	512	0.09		0.10	
	Total:		0.97	Total:	1.10
44	214	0.22		0.53	
	Total:		0.22	Total:	0.53
45	212	1.37		3.31	
	214	0.22		0.53	
	352	1.65		3.99	
	Total:		3.24	Total:	7.83
46	241	80.93		195.70	
	352	8.42		20.36	
	Total:		89.35	Total:	216.06
48	111	41.37		58.22	
	151	111.97		0.00	
	211	2.54		3.57	
	212	0.30		0.42	
	214	0.67		0.94	
	221	10.42		14.66	
	222	0.22		0.31	
	272	1.22		1.72	
	343	3.34		4.70	
	352	0.50		0.70	
	451	0.48		0.68	
	512	2.57		3.62	
	541	0.22		0.31	
	Total:		175.82	Total:	89.85
49	111	744.38		897.98	
	112	593.37		715.81	
	113	21.74		26.23	
	121	41.21		49.71	
	122	3.15		3.80	
	123	19.14		23.09	
	131	36.42		43.94	
	132	2951.34		3560.33	
	133	16.84		20.31	
	135	16.89		20.38	
	141	0.64		0.77	
	151	33.85		0.00	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	162	12.64		15.25	
	181	1000.33		1206.74	
	211	28.58		34.48	
	212	13.52		16.31	
	213	22.21		26.79	
	214	1616.42		1949.96	
	221	3228.05		3894.14	
	222	196.86		237.48	
	223	226.33		273.03	
	232	10.28		12.40	
	241	27.10		32.69	
	252	18.76		22.63	
	261	193.85		233.85	
	272	34.35		41.44	
	281	0.79		0.95	
	291	58.89		71.04	
	311	0.22		0.27	
	331	25.82		31.15	
	343	30.42		36.70	
	351	283.19		341.62	
	352	1294.15		1561.19	
	421	14.59		17.60	
	451	0.00		0.00	
	461	2.20		2.65	
	491	8.34		10.06	
	511	8.42		10.16	
	512	123.61		149.12	
	513	219.03		264.23	
	541	42.15		50.85	
	551	19.99		24.11	
	571	452.01		545.28	
	611	63.92		0.00	
	612	29.35		35.41	
	731	110.15		132.88	
		Total:	13895.49	Total:	16644.81
50	112	0.06		0.11	
	132	0.01		0.02	
	135	0.40		0.72	
	151	25.28		0.00	
	181	316.64		571.18	
	211	3.35		6.04	
	212	2.50		4.51	
	214	1.47		2.65	
	221	1.80		3.25	
	223	3.64		6.57	
	241	20.88		37.67	
	352	1.75		3.16	
	491	4.58		8.26	
	611	371.57		0.00	
		Total:	753.93	Total:	644.14

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
51	122	1.83		3.30	
	123	12.38		22.33	
	211	229.15		413.36	
	212	43.78		78.97	
	214	15.12		27.27	
	232	2.98		5.38	
	241	13.13		23.68	
	251	40.18		72.48	
	611	1.20		0.00	
		Total:	359.75	Total:	646.77
52	214	0.38		0.52	
		Total:	0.38	Total:	0.52
55	134	8.00		10.96	
	211	1.11		1.52	
	212	1.56		2.14	
	213	104.49		143.09	
	214	51.59		70.65	
	221	7.50		10.27	
	222	36.27		49.67	
	223	0.91		1.25	
	241	18.11		24.80	
	343	0.20		0.27	
	451	7.08		9.70	
	512	5.89		8.07	
	611	257.64		0.00	
		Total:	500.35	Total:	332.39
57	134	0.05		0.07	
	181	0.40		0.55	
	214	1.43		1.96	
	221	0.25		0.34	
	352	1.20		1.64	
	541	0.62		0.85	
	551	0.41		0.56	
		Total:	4.36	Total:	5.97
67	214	0.80		1.27	
	221	1.35		2.15	
	351	0.30		0.48	
	512	0.35		0.56	
		Total:	2.80	Total:	4.46
72	214	0.63		0.85	
	561	8.34		11.29	
		Total:	8.97	Total:	12.14
73	111	5.12		10.61	
	112	2.69		5.58	
	113	0.15		0.31	
	121	77.73		161.11	
	122	1.89		3.92	
	131	0.91		1.89	
	132	1.09		2.26	
	133	14.17		29.37	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	135	1.60		3.32	
	141	0.34		0.70	
	151	101.15		0.00	
	171	0.12		0.25	
	181	28.86		59.82	
	211	114.76		237.86	
	212	5.09		10.55	
	213	2535.18		5254.69	
	214	257.94		534.63	
	221	96.05		199.08	
	222	25.65		53.17	
	223	8.78		18.20	
	232	0.02		0.04	
	241	6.84		14.18	
	252	0.68		1.41	
	261	31.63		65.56	
	272	0.14		0.29	
	311	7.70		15.96	
	331	0.67		1.39	
	341	2.71		5.62	
	343	24.47		50.72	
	351	0.85		1.76	
	352	14.79		30.66	
	461	4.81		9.97	
	491	3.46		7.17	
	512	100.71		208.74	
	513	0.14		0.29	
	541	272.28		564.36	
	551	103.29		214.09	
	561	2.08		4.31	
	611	96.71		0.00	
	612	6.17		12.79	
	723	1.14		2.36	
	731	1.39		2.88	
	751	3.08		6.38	
		Total:	3965.03	Total:	7808.25
75	111	7.50		10.15	
	181	4.58		6.20	
	211	1.33		1.80	
	212	4.33		5.86	
	213	1.38		1.87	
	214	63.53		86.01	
	221	3.33		4.51	
	222	8.52		11.53	
	223	0.91		1.23	
	451	6.66		9.02	
	512	0.06		0.08	
		Total:	102.13	Total:	138.26
76	111	1.83		2.48	
	122	0.43		0.58	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	151	0.25		0.00	
	211	15.41		20.86	
	213	366.11		495.66	
	214	24.91		33.72	
	221	8.34		11.29	
	261	199.52		270.12	
	352	7.15		9.68	
	451	0.41		0.56	
	491	5.02		6.80	
	551	0.15		0.20	
		Total:	629.53	Total:	851.95
79	112	0.00		0.00	
	122	0.00		0.00	
	181	101.22		146.04	
	331	0.14		0.20	
	343	0.05		0.07	
	352	5.85		8.44	
	511	0.60		0.87	
	512	0.09		0.13	
	513	0.50		0.72	
	551	0.10		0.14	
	612	0.09		0.13	
		Total:	108.64	Total:	156.74
80	111	1.15		1.68	
	112	0.12		0.17	
	122	2.91		4.24	
	131	0.02		0.03	
	132	1.14		1.66	
	141	0.01		0.01	
	151	68.90		0.00	
	211	2.37		3.45	
	212	0.37		0.54	
	213	0.11		0.16	
	214	1.53		2.23	
	221	0.22		0.32	
	311	0.08		0.12	
	322	1.44		2.10	
	352	0.10		0.15	
	461	2.38		3.47	
	513	0.27		0.39	
	551	3.73		5.43	
	725	0.02		0.03	
		Total:	86.87	Total:	26.18
82	112	5.81		8.65	
	122	0.66		0.98	
	123	0.20		0.30	
	141	0.00		0.00	
	151	69.03		0.00	
	181	3.76		5.60	
	211	1.76		2.62	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	212	2.89		4.30	
	213	1.36		2.02	
	214	12.02		17.89	
	221	33.73		50.20	
	222	6.25		9.30	
	241	3.54		5.27	
	261	19.75		29.39	
	291	1.35		2.01	
	322	0.20		0.30	
	343	1.06		1.58	
	352	23.89		35.55	
	461	0.12		0.18	
	512	1.90		2.83	
	513	3.33		4.96	
	551	31.85		47.40	
	611	0.60		0.00	
	711	0.04		0.06	
		Total:	225.10	Total:	231.39
83	611	1.10		0.00	
		Total:	1.10	Total:	0.00
84	151	1.68		0.00	
		Total:	1.68	Total:	0.00
86	214	0.90		1.34	
		Total:	0.90	Total:	1.34
89	111	0.00		0.00	
	221	13.65		28.29	
		Total:	13.65	Total:	28.29
91	151	7.79		0.00	
	181	6.53		7.44	
	212	7.47		8.51	
	213	0.04		0.05	
	214	26.01		29.64	
	221	39.45		44.95	
	222	34.95		39.83	
	223	12.87		14.67	
	232	0.49		0.56	
	241	19.29		21.98	
	251	10.42		11.87	
	321	16.00		18.23	
	451	4.17		4.75	
	491	22.93		26.13	
	511	0.30		0.34	
	512	1.65		1.88	
	513	0.32		0.36	
	551	0.07		0.08	
	561	0.05		0.06	
	611	6.47		0.00	
	612	12.20		13.90	
		Total:	229.47	Total:	245.23
92	221	0.44		0.50	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	252	1.10		1.25	
		Total:	1.54	Total:	1.75
94	112	5.05		5.78	
	133	0.75		0.86	
	221	0.20		0.23	
	311	0.84		0.96	
	341	0.27		0.31	
	352	5.98		6.84	
	513	0.96		1.10	
	541	0.15		0.17	
	551	0.69		0.79	
	611	0.25		0.00	
		Total:	15.14	Total:	17.04
96	211	0.40		0.46	
		Total:	0.40	Total:	0.46
97	151	2.68		0.00	
	211	0.16		0.18	
	214	48.69		55.48	
	221	23.01		26.22	
	261	2.24		2.55	
	281	0.31		0.35	
	291	4.16		4.74	
	352	2.75		3.13	
	513	2.52		2.87	
	551	0.05		0.06	
		Total:	86.57	Total:	95.58
99	111	290.89		290.89	
	112	3.88		3.88	
	113	8.90		8.90	
	121	27.21		27.21	
	122	0.68		0.68	
	123	244.13		244.13	
	131	35.07		35.07	
	132	662.58		662.58	
	134	4.16		4.16	
	135	0.47		0.47	
	141	0.10		0.10	
	151	3.99		0.00	
	171	142.93		142.93	
	172	12.64		12.64	
	181	99.22		99.22	
	211	8.62		8.62	
	212	21.30		21.30	
	213	0.12		0.12	
	214	44.51		44.51	
	221	43.68		43.68	
	222	4.67		4.67	
	241	22.86		22.86	
	271	0.68		0.68	
	272	26.30		26.30	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	343	7.15		7.15	
	351	7.66		7.66	
	352	12.87		12.87	
	451	0.26		0.26	
	461	0.87		0.87	
	471	37.98		37.98	
	491	51.34		51.34	
	512	0.17		0.17	
	513	0.02		0.02	
	521	13.31		13.31	
	541	1.42		1.42	
	551	6.69		6.69	
	561	59.12		59.12	
		Total:	1908.45	Total:	1904.46

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	111	290.89		290.89	
	112	3.88		3.88	
	113	8.90		8.90	
	121	27.21		27.21	
	122	0.68		0.68	
	123	244.13		244.13	
	131	35.07		35.07	
	132	662.58		662.58	
	134	4.16		4.16	
	135	0.47		0.47	
	141	0.10		0.10	
	151	3.99		0.00	
	171	142.93		142.93	
	172	12.64		12.64	
	181	99.22		99.22	
	211	8.62		8.62	
	212	21.30		21.30	
	213	0.12		0.12	
	214	44.51		44.51	
	221	43.68		43.68	
	222	4.67		4.67	
	241	22.86		22.86	
	271	0.68		0.68	
	272	26.30		26.30	
	343	7.15		7.15	
	351	7.66		7.66	
	352	12.87		12.87	
	451	0.26		0.26	
	461	0.87		0.87	
	471	37.98		37.98	
	491	51.34		51.34	
	512	0.17		0.17	
	513	0.02		0.02	
	521	13.31		13.31	
	541	1.42		1.42	
	551	6.69		6.69	
	561	59.12		59.12	
		Total:	1908.45	Total:	1904.46
Construction	151	1.89		0.00	
	181	201.34		242.43	
	211	2.10		2.53	
	212	0.90		1.08	
	214	6.28		7.56	
	221	26.61		32.04	
	352	3.21		3.87	
	461	14.28		17.19	
		Total:	256.61	Total:	306.70
Manufacturing	111	4570.65		7679.45	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	112	1688.11		2563.40	
	113	362.80		719.54	
	121	799.18		1122.60	
	122	789.86		1476.96	
	123	2959.92		4599.03	
	131	1315.71		1698.28	
	132	3870.59		5865.38	
	133	190.89		187.37	
	134	7884.87		17007.86	
	135	325.61		407.34	
	141	112.10		167.99	
	151	229.86		0.00	
	171	4056.98		7164.71	
	172	46.45		58.55	
	181	1753.36		2782.55	
	211	1668.95		3331.74	
	212	2250.82		4524.68	
	213	280.63		517.92	
	214	3845.46		7173.06	
	221	7132.94		9943.69	
	222	416.96		594.28	
	223	109.07		180.70	
	231	0.08		0.18	
	232	9.15		7.19	
	241	387.90		723.12	
	251	1.25		1.89	
	261	95.46		115.63	
	271	31.73		31.38	
	272	61.02		99.91	
	281	3.28		5.60	
	291	1.12		1.21	
	311	54.18		86.31	
	322	2.58		5.59	
	331	98.95		109.37	
	341	128.28		261.33	
	342	20.80		31.64	
	343	471.02		840.88	
	351	32.11		47.01	
	352	2355.79		4864.31	
	411	3.39		5.12	
	421	38.64		58.32	
	441	1.83		2.76	
	451	9.78		20.99	
	461	1391.55		1685.45	
	471	3.00		4.52	
	491	1014.24		1858.18	
	511	5.62		8.50	
	512	998.17		1712.87	
	513	748.00		1077.01	
	521	1051.99		1598.02	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	541	80.27		187.84	
	551	579.70		978.78	
	561	0.38		0.58	
	571	37.91		37.13	
	581	13.10		26.72	
	591	10.32		15.53	
	611	3048.38		0.00	
	711	36.50		50.07	
	721	77.49		154.59	
	722	38.50		37.71	
	723	104.63		102.50	
	724	0.22		0.33	
	725	0.04		0.11	
	726	0.44		0.97	
	731	14.93		21.20	
	741	6.90		8.42	
	751	15.53		20.77	
	791	165.73		162.67	
		Total:	59913.65	Total:	96837.29
Transportation, Communication, Utilities	111	785.75		956.20	
	112	593.37		715.81	
	113	21.74		26.23	
	121	55.88		78.40	
	122	3.15		3.80	
	123	19.14		23.09	
	131	53.10		76.56	
	132	2951.34		3560.33	
	133	16.84		20.31	
	134	60.46		118.23	
	135	16.89		20.38	
	141	0.64		0.77	
	151	145.82		0.00	
	162	12.64		15.25	
	181	1000.33		1206.74	
	211	31.12		38.05	
	212	15.19		20.04	
	213	22.21		26.79	
	214	1617.53		1951.96	
	221	3256.64		3944.33	
	222	199.16		241.86	
	223	226.33		273.03	
	232	10.28		12.40	
	241	108.03		228.39	
	252	18.76		22.63	
	261	193.85		233.85	
	272	35.57		43.16	
	281	0.79		0.95	
	291	58.89		71.04	
	311	0.22		0.27	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	331	25.82		31.15	
	343	33.76		41.40	
	351	283.19		341.62	
	352	1305.92		1588.59	
	421	14.59		17.60	
	451	0.48		0.68	
	461	2.20		2.65	
	491	25.43		43.48	
	511	8.42		10.16	
	512	126.18		152.74	
	513	219.03		264.23	
	541	42.81		52.02	
	551	19.99		24.11	
	571	452.01		545.28	
	611	64.76		0.00	
	612	29.35		35.41	
	731	110.15		132.88	
		Total:	14295.75	Total:	17214.85
Wholesale Trade	112	0.06		0.11	
	122	1.83		3.30	
	123	12.38		22.33	
	132	0.01		0.02	
	135	0.40		0.72	
	151	25.28		0.00	
	181	316.64		571.18	
	211	232.50		419.40	
	212	46.28		83.48	
	214	16.59		29.92	
	221	1.80		3.25	
	223	3.64		6.57	
	232	2.98		5.38	
	241	34.01		61.35	
	251	40.18		72.48	
	352	1.75		3.16	
	491	4.58		8.26	
	611	372.77		0.00	
		Total:	1113.68	Total:	1290.91
Retail Trade	134	8.05		11.03	
	181	0.40		0.55	
	211	1.11		1.52	
	212	1.56		2.14	
	213	104.49		143.09	
	214	53.40		73.13	
	221	7.75		10.61	
	222	36.27		49.67	
	223	0.91		1.25	
	241	18.11		24.80	
	343	0.20		0.27	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	352	1.20		1.64	
	451	7.08		9.70	
	512	5.89		8.07	
	541	0.62		0.85	
	551	0.41		0.56	
	611	257.64		0.00	
		Total:	505.09	Total:	338.88
Finance, Insurance & Real Estate	214	0.80		1.27	
	221	1.35		2.15	
	351	0.30		0.48	
	512	0.35		0.56	
		Total:	2.80	Total:	4.46
Services	111	15.60		24.92	
	112	8.62		14.40	
	113	0.15		0.31	
	121	77.73		161.11	
	122	5.89		9.72	
	123	0.20		0.30	
	131	0.93		1.92	
	132	2.23		3.92	
	133	14.17		29.37	
	135	1.60		3.32	
	141	0.35		0.71	
	151	241.01		0.00	
	171	0.12		0.25	
	181	138.42		217.66	
	211	135.63		266.59	
	212	12.68		21.25	
	213	2904.14		5754.40	
	214	361.46		676.67	
	221	155.32		293.69	
	222	40.42		74.00	
	223	9.69		19.43	
	232	0.02		0.04	
	241	10.38		19.45	
	252	0.68		1.41	
	261	250.90		365.07	
	272	0.14		0.29	
	291	1.35		2.01	
	311	7.78		16.08	
	322	1.64		2.40	
	331	0.81		1.59	
	341	2.71		5.62	
	343	25.58		52.37	
	351	0.85		1.76	
	352	51.78		84.48	
	451	7.07		9.58	
	461	7.31		13.62	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	491	8.48		13.97	
	511	0.60		0.87	
	512	102.76		211.78	
	513	4.24		6.36	
	541	272.28		564.36	
	551	139.12		267.26	
	561	10.42		15.60	
	611	98.41		0.00	
	612	6.26		12.92	
	711	0.04		0.06	
	723	1.14		2.36	
	725	0.02		0.03	
	731	1.39		2.88	
	751	3.08		6.38	
		Total:	5143.60	Total:	9254.54
Government	112	5.05		5.78	
	133	0.75		0.86	
	151	10.47		0.00	
	181	6.53		7.44	
	211	0.56		0.64	
	212	7.69		8.76	
	213	0.04		0.05	
	214	74.92		85.37	
	221	63.10		71.90	
	222	34.95		39.83	
	223	12.87		14.67	
	232	0.49		0.56	
	241	19.29		21.98	
	251	10.42		11.87	
	252	1.10		1.25	
	261	2.24		2.55	
	281	0.31		0.35	
	291	4.16		4.74	
	311	0.84		0.96	
	321	16.00		18.23	
	341	0.27		0.31	
	343	0.22		0.25	
	352	8.95		10.22	
	451	4.17		4.75	
	491	22.93		26.13	
	511	0.30		0.34	
	512	1.74		1.98	
	513	3.80		4.33	
	541	0.15		0.17	
	551	0.81		0.93	
	561	0.05		0.06	
	611	6.72		0.00	
	612	12.20		13.90	
		Total:	334.09	Total:	361.16

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
15	WASTE OIL	2.08		2.50	
	NON-HALOGENATED SOLVENTS	4.04		4.86	
	DYE & PAINT SLUDGES AND RESINS	2.50		3.01	
	MISCELLANEOUS WASTES	1.89		0.00	
	Total:		10.51	Total:	10.37
16	HALOGENATED SOLVENTS	1.41		1.70	
	Total:		1.41	Total:	1.70
17	WASTE OIL	24.53		29.54	
	HALOGENATED SOLVENTS	0.69		0.83	
	NON-HALOGENATED SOLVENTS	3.14		3.78	
	OILY SLUDGES	3.21		3.87	
	DYE & PAINT SLUDGES AND RESINS	11.78		14.18	
	MISCELLANEOUS WASTES	201.34		242.43	
	Total:		244.69	Total:	294.63
20	WASTE OIL	1.14		0.80	
	NON-HALOGENATED SOLVENTS	1.39		0.97	
	PESTICIDES	8.19		5.74	
	OILY SLUDGES	0.60		0.42	
	METAL-CONTAINING LIQUIDS	0.00		0.00	
	NON-METALLIC INORGANIC LIQUIDS	124.15		87.06	
	MISCELLANEOUS WASTES	11.47		8.04	
	Total:		146.94	Total:	103.03
24	NON-HALOGENATED SOLVENTS	7.23		12.12	
	Total:		7.23	Total:	12.12
25	OILY SLUDGES	0.22		0.37	
	Total:		0.22	Total:	0.37
26	WASTE OIL	5.91		9.91	
	HALOGENATED SOLVENTS	5.68		9.52	
	NON-HALOGENATED SOLVENTS	107.66		180.50	
	Total:		119.25	Total:	199.93
27	WASTE OIL	7.29		13.21	
	HALOGENATED SOLVENTS	4.43		8.03	
	NON-HALOGENATED SOLVENTS	61.11		110.76	
	ORGANIC LIQUIDS	3.66		6.63	
	DIOXINS	0.03		0.05	
	OILY SLUDGES	77.22		139.95	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	27.50		49.84	
	METAL-CONTAINING SLUDGES	68.97		125.00	
	METAL-CONTAINING LIQUIDS	21.90		39.69	
	NON-METALLIC INORGANIC LIQUIDS	0.39		0.71	
	MISCELLANEOUS WASTES	8.67		15.71	
	Total:		281.17	Total:	509.58
28	WASTE OIL	209.12		314.78	
	HALOGENATED SOLVENTS	76.37		114.96	
	NON-HALOGENATED SOLVENTS	379.71		571.56	
	ORGANIC LIQUIDS	210.66		317.10	
	PESTICIDES	0.96		1.45	
	DIOXINS	6.59		9.92	
	OILY SLUDGES	236.64		356.21	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.20		0.30	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	116.35		175.14	
	DYE & PAINT SLUDGES AND RESINS	344.56		518.66	
	METAL-CONTAINING SLUDGES	80.71		121.49	
	METAL-CONTAINING LIQUIDS	1706.05		2568.07	
	NON-METALLIC INORGANIC LIQUIDS	1964.05		2956.43	
	SOIL	679.45		0.00	
	MISCELLANEOUS WASTES	947.31		1425.96	
	Total:		6958.73	Total:	9452.03
29	WASTE OIL	4520.53		6766.22	
	NON-HALOGENATED SOLVENTS	4.33		6.48	
	ORGANIC LIQUIDS	32.10		48.05	
	OILY SLUDGES	44.29		66.29	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	24.18		36.19	
	METAL-CONTAINING LIQUIDS	0.67		1.00	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.33	
	SOIL	13.04		0.00	
	MISCELLANEOUS WASTES	41.15		0.00	
	Total:		4680.51	Total:	6924.56
30	WASTE OIL	2.24		2.76	
	HALOGENATED SOLVENTS	0.20		0.25	
	NON-HALOGENATED SOLVENTS	1.13		1.39	
	Total:		3.57	Total:	4.40
32	HALOGENATED SOLVENTS	2.78		3.47	
	NON-HALOGENATED SOLVENTS	16.03		20.02	
	OILY SLUDGES	0.40		0.50	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	4.94		6.17	
	DYE & PAINT SLUDGES AND RESINS	0.44		0.54	
	METAL-CONTAINING LIQUIDS	1.22		1.52	
	NON-METALLIC INORGANIC LIQUIDS	1.60		1.99	
	SOIL	60.67		0.00	
	MISCELLANEOUS WASTES	8.38		0.00	
	Total:		96.46	Total:	34.21
33	WASTE OIL	89.78		105.37	
	HALOGENATED SOLVENTS	7.11		8.34	
	NON-HALOGENATED SOLVENTS	39.66		46.55	
	DIOXINS	9.87		11.58	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	19.59		22.99	
	METAL-CONTAINING LIQUIDS	17.56		20.62	
	CYANIDE & METAL LIQUIDS	0.45		0.53	
	NON-METALLIC INORGANIC LIQUIDS	171.92		201.77	
	SOIL	226.67		0.00	
	MISCELLANEOUS WASTES	163.87		192.33	
	Total:		746.48	Total:	610.08
34	WASTE OIL	9.85		13.10	
	HALOGENATED SOLVENTS	21.29		28.32	
	NON-HALOGENATED SOLVENTS	82.13		109.26	
	ORGANIC LIQUIDS	7.40		9.84	
	OILY SLUDGES	295.28		392.80	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	39.71		52.83	
	DYE & PAINT SLUDGES AND RESINS	220.12		292.82	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	METAL-CONTAINING SLUDGES	77.56		103.18	
	METAL-CONTAINING LIQUIDS	150.91		200.75	
	CYANIDE & METAL LIQUIDS	10.33		13.74	
	NON-METALLIC INORGANIC LIQUIDS	493.38		656.32	
	MISCELLANEOUS WASTES	257.39		342.39	
	Total:		1665.35	Total:	2215.35
35	WASTE OIL	343.18		754.15	
	HALOGENATED SOLVENTS	1184.54		2603.05	
	NON-HALOGENATED SOLVENTS	3716.39		8166.83	
	ORGANIC LIQUIDS	7793.51		17126.38	
	PESTICIDES	0.08		0.18	
	DIOXINS	8.22		18.06	
	OILY SLUDGES	1870.36		4110.15	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	2.22		4.88	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	671.35		1475.30	
	DYE & PAINT SLUDGES AND RESINS	44.58		97.97	
	METAL-CONTAINING SLUDGES	2215.70		4869.04	
	METAL-CONTAINING LIQUIDS	1705.64		3748.18	
	CYANIDE & METAL LIQUIDS	7.66		16.83	
	NON-METALLIC INORGANIC LIQUIDS	929.25		2042.05	
	NON-METALLIC INORGANIC SLUDGES	14.82		32.57	
	SOIL	718.48		0.00	
	MISCELLANEOUS WASTES	1045.58		2297.67	
	Total:		22271.56	Total:	47363.29
36	WASTE OIL	131.69		198.77	
	HALOGENATED SOLVENTS	248.82		375.55	
	NON-HALOGENATED SOLVENTS	1791.00		2703.24	
	ORGANIC LIQUIDS	328.00		495.07	
	DIOXINS	23.43		35.37	
	OILY SLUDGES	216.22		326.35	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	44.38		66.99	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	285.03		430.21	
	DYE & PAINT SLUDGES AND RESINS	10.92		16.49	
	METAL-CONTAINING SLUDGES	532.27		803.38	
	METAL-CONTAINING LIQUIDS	4546.64		6862.46	
	CYANIDE & METAL LIQUIDS	0.89		1.34	
	NON-METALLIC INORGANIC LIQUIDS	3228.26		4872.57	
	NON-METALLIC INORGANIC SLUDGES	1081.03		1631.65	
	SOIL	411.56		0.00	
	MISCELLANEOUS WASTES	1537.97		2321.34	
	Total:		14418.11	Total:	21140.78
37	WASTE OIL	1886.71		1847.92	
	HALOGENATED SOLVENTS	88.39		86.57	
	NON-HALOGENATED SOLVENTS	103.67		101.53	
	ORGANIC LIQUIDS	313.96		307.50	
	DIOXINS	61.77		60.50	
	OILY SLUDGES	12.65		12.39	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	8.14		7.98	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	186.33		182.50	
	DYE & PAINT SLUDGES AND RESINS	842.60		825.28	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	METAL-CONTAINING SLUDGES	1036.56		1015.25	
	METAL-CONTAINING LIQUIDS	1182.11		1157.81	
	CYANIDE & METAL LIQUIDS	16.73		16.39	
	NON-METALLIC INORGANIC LIQUIDS	625.02		612.17	
	SOIL	931.74		0.00	
	MISCELLANEOUS WASTES	619.22		606.49	
	Total:		7915.60	Total:	6840.28
38	WASTE OIL	34.57		97.40	
	HALOGENATED SOLVENTS	35.35		99.59	
	NON-HALOGENATED SOLVENTS	65.25		183.83	
	ORGANIC LIQUIDS	6.57		18.51	
	DIOXINS	0.48		1.35	
	OILY SLUDGES	18.87		53.16	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	3.73		10.51	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	68.07		191.78	
	DYE & PAINT SLUDGES AND RESINS	25.48		71.79	
	METAL-CONTAINING SLUDGES	43.81		123.43	
	METAL-CONTAINING LIQUIDS	128.82		362.92	
	CYANIDE & METAL LIQUIDS	0.44		1.24	
	NON-METALLIC INORGANIC LIQUIDS	69.50		195.82	
	SOIL	6.77		0.00	
	MISCELLANEOUS WASTES	90.23		254.20	
	Total:		597.94	Total:	1665.53
39	HALOGENATED SOLVENTS	0.89		2.51	
	NON-HALOGENATED SOLVENTS	0.22		0.62	
	METAL-CONTAINING SLUDGES	1.40		3.94	
	METAL-CONTAINING LIQUIDS	0.22		0.62	
	MISCELLANEOUS WASTES	1.80		5.07	
	Total:		4.53	Total:	12.76
42	WASTE OIL	18.17		35.53	
	ORGANIC LIQUIDS	60.46		118.23	
	OILY SLUDGES	3.28		6.42	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	17.09		33.42	
	METAL-CONTAINING LIQUIDS	14.67		28.69	
	NON-METALLIC INORGANIC LIQUIDS	16.68		32.62	
	SOIL	0.84		0.00	
	MISCELLANEOUS WASTES	0.44		0.86	
	Total:		131.63	Total:	255.77
43	NON-HALOGENATED SOLVENTS	0.44		0.50	
	ORGANIC LIQUIDS	0.22		0.25	
	OILY SLUDGES	0.22		0.25	
	MISCELLANEOUS WASTES	0.09		0.10	
	Total:		0.97	Total:	1.10
44	NON-HALOGENATED SOLVENTS	1.81		4.37	
	Total:		1.81	Total:	4.37
45	OILY SLUDGES	10.07		24.35	
	Total:		10.07	Total:	24.35
46	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	80.93		195.70	
	Total:		80.93	Total:	195.70
48	WASTE OIL	10.42		14.66	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	HALOGENATED SOLVENTS	2.54		3.57	
	NON-HALOGENATED SOLVENTS	0.97		1.36	
	ORGANIC LIQUIDS	3.34		4.70	
	OILY SLUDGES	0.72		1.01	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.48		0.68	
	DYE & PAINT SLUDGES AND RESINS	1.22		1.72	
	METAL-CONTAINING LIQUIDS	41.37		58.22	
	MISCELLANEOUS WASTES	114.76		0.00	
	Total:		175.82	Total:	85.92
49	WASTE OIL	3454.38		4167.17	
	HALOGENATED SOLVENTS	28.58		34.48	
	NON-HALOGENATED SOLVENTS	1652.15		1993.06	
	ORGANIC LIQUIDS	47.26		57.01	
	PESTICIDES	10.28		12.40	
	DIOXINS	304.00		366.73	
	OILY SLUDGES	1491.01		1798.67	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	283.19		341.62	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	506.21		610.66	
	DYE & PAINT SLUDGES AND RESINS	96.23		116.08	
	METAL-CONTAINING LIQUIDS	3736.93		4508.02	
	NON-METALLIC INORGANIC LIQUIDS	690.71		833.25	
	NON-METALLIC INORGANIC SLUDGES	14.59		17.60	
	SOIL	63.92		0.00	
	MISCELLANEOUS WASTES	1516.05		1828.89	
	Total:		13895.49	Total:	16685.64
50	WASTE OIL	5.44		9.82	
	HALOGENATED SOLVENTS	3.35		6.04	
	NON-HALOGENATED SOLVENTS	3.97		7.16	
	OILY SLUDGES	1.75		3.16	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	25.46		45.93	
	METAL-CONTAINING LIQUIDS	0.01		0.02	
	NON-METALLIC INORGANIC LIQUIDS	0.46		0.83	
	SOIL	371.57		0.00	
	MISCELLANEOUS WASTES	341.92		0.00	
	Total:		753.93	Total:	72.96
51	HALOGENATED SOLVENTS	229.15		413.36	
	NON-HALOGENATED SOLVENTS	58.90		106.24	
	PESTICIDES	2.98		5.38	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	40.18		72.48	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	13.13		23.68	
	NON-METALLIC INORGANIC LIQUIDS	14.21		25.63	
	SOIL	1.20		0.00	
	Total:		359.75	Total:	646.77
52	NON-HALOGENATED SOLVENTS	0.38		0.52	
	Total:		0.38	Total:	0.52
55	WASTE OIL	8.41		11.52	
	HALOGENATED SOLVENTS	1.11		1.52	
	NON-HALOGENATED SOLVENTS	157.64		215.88	
	ORGANIC LIQUIDS	8.20		11.23	
	OILY SLUDGES	36.27		49.67	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	HALOGENATED ORGANIC SLUDGES & SOLIDS	7.08		9.70	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	18.11		24.80	
	SOIL	257.64		0.00	
	MISCELLANEOUS WASTES	5.89		8.07	
	Total:		500.35	Total:	332.39
57	WASTE OIL	0.25		0.34	
	NON-HALOGENATED SOLVENTS	1.43		1.96	
	ORGANIC LIQUIDS	0.05		0.07	
	OILY SLUDGES	1.20		1.64	
	MISCELLANEOUS WASTES	1.43		1.96	
	Total:		4.36	Total:	5.97
67	WASTE OIL	1.35		2.15	
	NON-HALOGENATED SOLVENTS	0.80		1.27	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.30		0.48	
	MISCELLANEOUS WASTES	0.35		0.56	
	Total:		2.80	Total:	4.46
72	NON-HALOGENATED SOLVENTS	0.63		0.85	
	MISCELLANEOUS WASTES	8.34		11.29	
	Total:		8.97	Total:	12.14
73	WASTE OIL	104.83		217.28	
	HALOGENATED SOLVENTS	114.76		237.86	
	NON-HALOGENATED SOLVENTS	2798.21		5799.87	
	ORGANIC LIQUIDS	41.35		85.71	
	PESTICIDES	0.02		0.04	
	DIOXINS	33.02		68.44	
	OILY SLUDGES	40.44		83.83	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	3.93		8.14	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	10.98		22.76	
	DYE & PAINT SLUDGES AND RESINS	4.95		10.26	
	METAL-CONTAINING SLUDGES	0.12		0.25	
	METAL-CONTAINING LIQUIDS	85.08		176.34	
	NON-METALLIC INORGANIC LIQUIDS	7.24		15.02	
	SOIL	96.71		0.00	
	MISCELLANEOUS WASTES	623.39		1292.10	
	Total:		3965.03	Total:	8017.90
75	WASTE OIL	4.24		5.74	
	HALOGENATED SOLVENTS	1.33		1.80	
	NON-HALOGENATED SOLVENTS	69.24		93.74	
	OILY SLUDGES	8.52		11.53	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	6.66		9.02	
	METAL-CONTAINING LIQUIDS	7.50		10.15	
	MISCELLANEOUS WASTES	4.64		6.28	
	Total:		102.13	Total:	138.26
76	WASTE OIL	8.34		11.29	
	HALOGENATED SOLVENTS	15.41		20.86	
	NON-HALOGENATED SOLVENTS	391.02		529.38	
	DIOXINS	199.52		270.12	
	OILY SLUDGES	7.15		9.68	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.41		0.56	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.02		6.80	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	METAL-CONTAINING LIQUIDS	1.83		2.48	
	NON-METALLIC INORGANIC LIQUIDS	0.43		0.58	
	MISCELLANEOUS WASTES	0.40		0.00	
	Total:		629.53	Total:	851.75
79	ORGANIC LIQUIDS	0.05		0.07	
	OILY SLUDGES	5.85		8.44	
	NON-METALLIC INORGANIC LIQUIDS	0.00		0.00	
	MISCELLANEOUS WASTES	102.74		148.23	
	Total:		108.64	Total:	156.74
80	WASTE OIL	0.22		0.32	
	HALOGENATED SOLVENTS	2.37		3.45	
	NON-HALOGENATED SOLVENTS	2.01		2.93	
	OILY SLUDGES	0.10		0.15	
	DYE & PAINT SLUDGES AND RESINS	2.38		3.47	
	METAL-CONTAINING LIQUIDS	2.31		3.37	
	NON-METALLIC INORGANIC LIQUIDS	3.05		4.44	
	MISCELLANEOUS WASTES	74.43		108.43	
	Total:		86.87	Total:	126.56
82	WASTE OIL	33.73		50.20	
	HALOGENATED SOLVENTS	1.76		2.62	
	NON-HALOGENATED SOLVENTS	16.27		24.21	
	ORGANIC LIQUIDS	1.06		1.58	
	DIOXINS	19.75		29.39	
	OILY SLUDGES	30.14		44.85	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	3.54		5.27	
	DYE & PAINT SLUDGES AND RESINS	1.47		2.19	
	CYANIDE & METAL LIQUIDS	0.04		0.06	
	NON-METALLIC INORGANIC LIQUIDS	6.67		9.93	
	SOIL	0.60		0.00	
	MISCELLANEOUS WASTES	110.07		163.82	
	Total:		225.10	Total:	334.12
83	SOIL	1.10		0.00	
	Total:		1.10	Total:	0.00
84	MISCELLANEOUS WASTES	1.68		0.00	
	Total:		1.68	Total:	0.00
86	NON-HALOGENATED SOLVENTS	0.90		1.34	
	Total:		0.90	Total:	1.34
89	WASTE OIL	13.65		28.29	
	METAL-CONTAINING LIQUIDS	0.00		0.00	
	Total:		13.65	Total:	28.29
91	WASTE OIL	52.32		59.62	
	NON-HALOGENATED SOLVENTS	33.52		38.20	
	PESTICIDES	0.49		0.56	
	OILY SLUDGES	34.95		39.83	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	14.59		16.62	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	58.22		66.34	
	SOIL	6.47		0.00	
	MISCELLANEOUS WASTES	28.91		0.00	
	Total:		229.47	Total:	221.17
92	WASTE OIL	0.44		0.50	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.10		1.25	
	Total:		1.54		1.75
94	WASTE OIL	0.20		0.23	
	ORGANIC LIQUIDS	1.02		1.17	
	OILY SLUDGES	5.98		6.84	
	NON-METALLIC INORGANIC LIQUIDS	5.05		5.78	
	SOIL	0.25		0.00	
	MISCELLANEOUS WASTES	2.64		3.02	
	Total:		15.14		17.04
96	HALOGENATED SOLVENTS	0.40		0.46	
	Total:		0.40		0.46
97	WASTE OIL	23.01		26.22	
	HALOGENATED SOLVENTS	0.16		0.18	
	NON-HALOGENATED SOLVENTS	48.69		55.48	
	DIOXINS	2.24		2.55	
	OILY SLUDGES	2.75		3.13	
	DYE & PAINT SLUDGES AND RESINS	4.47		5.09	
	MISCELLANEOUS WASTES	5.25		0.00	
	Total:		86.57		92.65
99	WASTE OIL	43.68		43.68	
	HALOGENATED SOLVENTS	8.62		8.62	
	NON-HALOGENATED SOLVENTS	65.93		65.93	
	ORGANIC LIQUIDS	11.31		11.31	
	OILY SLUDGES	17.54		17.54	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	7.92		7.92	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	112.18		112.18	
	DYE & PAINT SLUDGES AND RESINS	27.85		27.85	
	METAL-CONTAINING SLUDGES	142.93		142.93	
	METAL-CONTAINING LIQUIDS	980.68		980.68	
	NON-METALLIC INORGANIC LIQUIDS	293.13		293.13	
	NON-METALLIC INORGANIC SLUDGES	13.31		13.31	
	MISCELLANEOUS WASTES	183.37		183.37	
	Total:		1908.45		1908.45

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN SANTA CLARA COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	1,904	1,714	1,143
Agriculture & Mining	0	0	0
Construction	307	276	184
Manufacturing	96,837	87,154	58,102
Transport, Communication, Utilities	17,215	15,493	10,329
Wholesale Trade	1,291	1,162	775
Retail Trade	339	305	203
Finance, Insurance, & Real Estate	4	4	3
Services	9,255	8,329	5,553
Government	361	325	217
TOTALS	127,513	114,762	76,508

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN SANTA CLARA COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	14,841	13,357	8,905
Halogenated Solvents	4,078	3,670	2,447
Non-halogenated Solvents	21,169	19,052	12,701
Organic Liquids	18,620	16,758	11,172
Pesticides	26	23	15
Dioxins	874	787	524
Oily Sludges	7,573	6,816	4,544
Halogenated Organic Sludges & Solids	558	502	335
Non-halogenated Organic Sludges&Solids	3,772	3,395	2,263
Dye & Paint Sludges & Resins	2,007	1,807	1,204
Metal-Containing Sludges	7,308	6,577	4,385
Metal-Containing Liquids	20,732	18,658	12,439
Cyanide & Metal Liquids	50	45	30
Non-metallic Inorganic Liquids	12,848	11,564	7,709
Non-metallic Inorganic Sludges	1,695	1,526	1,017
Contaminated Soil	0	0	0
Miscellaneous Wastes	11,362	10,226	6,817
TOTALS	127,513	114,762	76,508

9/1/88

COUNTY: SOLANO

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	20	18.69		29.97	
	24	27.10		52.48	
	35	5.42		11.15	
	36	37.52		298.17	
	49	4.26		5.05	
	97	150.64		170.41	
		Total:	243.63	Total:	567.23
121	24	52.94		102.52	
	36	1.60		12.71	
	97	0.83		0.94	
		Total:	55.37	Total:	116.17
122	29	205.29		546.27	
	89	2.66		6.30	
	97	21.52		24.34	
		Total:	229.47	Total:	576.91
123	97	100.45		113.63	
		Total:	100.45	Total:	113.63
132	28	0.20		0.36	
	29	693.64		1845.76	
	49	4.17		4.95	
	97	41.77		47.25	
		Total:	739.78	Total:	1898.32
133	97	0.75		0.85	
		Total:	0.75	Total:	0.85
134	28	5.56		9.93	
	49	10.34		12.26	
	97	0.04		0.05	
		Total:	15.94	Total:	22.24
135	29	16.68		44.39	
	49	14.59		17.30	
	97	1.45		1.64	
		Total:	32.72	Total:	63.33
141	29	459.76		1223.41	
	49	0.29		0.34	
		Total:	460.05	Total:	1223.75
151	17	2.52		0.00	
	29	256.16		0.00	
	82	0.60		0.00	
	97	151.09		0.00	
		Total:	410.37	Total:	0.00

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
161	29	1703.45		4532.84	
		Total:	1703.45	Total:	4532.84
162	28	15.47		27.64	
	29	200.86		534.48	
		Total:	216.33	Total:	562.12
171	97	0.07		0.08	
		Total:	0.07	Total:	0.08
181	28	0.62		1.11	
	29	852.92		2269.60	
	42	8.29		17.98	
	49	293.47		348.05	
	97	2.56		2.90	
		Total:	1157.86	Total:	2639.64
211	25	1.35		2.61	
	28	4.17		7.45	
	34	2.74		7.48	
	97	11.25		12.73	
		Total:	19.51	Total:	30.27
212	25	0.22		0.43	
	28	1.90		3.39	
	29	1.83		4.87	
		Total:	3.95	Total:	8.69
213	29	2.31		6.15	
		Total:	2.31	Total:	6.15
214	20	3.85		6.17	
	28	6.24		11.15	
	29	2.29		6.09	
	34	32.98		90.08	
	35	1.82		3.74	
	49	1.37		1.62	
	55	25.98		51.11	
	75	8.13		12.40	
	82	0.44		0.57	
	89	2.25		5.33	
	97	53.32		60.32	
		Total:	138.67	Total:	248.58
221	20	19.80		31.75	
	28	9.79		17.49	
	29	0.45		1.20	
	34	71.29		194.73	
	49	121.68		144.31	
	89	0.10		0.24	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	94	0.40		0.45	
	97	237.97		269.20	
		Total:	461.48	Total:	659.37
222	29	4687.64		12473.69	
	34	35.86		97.95	
	41	4.17		17.56	
	49	0.45		0.53	
	55	40.27		79.23	
	75	70.46		107.49	
	97	100.08		113.21	
		Total:	4938.93	Total:	12889.66
223	28	33.42		59.71	
	29	701.92		1867.79	
	34	28.79		78.64	
	49	6.53		7.74	
	97	25.28		28.60	
		Total:	795.94	Total:	2042.48
241	28	42.96		76.76	
	29	13.00		34.59	
	34	102.32		279.48	
		Total:	158.28	Total:	390.83
252	29	6.33		16.84	
	89	0.61		1.44	
		Total:	6.94	Total:	18.28
261	49	10.05		11.92	
	80	24.07		39.92	
	97	249.52		282.27	
		Total:	283.64	Total:	334.11
271	34	62.99		172.05	
	97	0.15		0.17	
		Total:	63.14	Total:	172.22
281	89	3.88		9.19	
	97	0.10		0.11	
		Total:	3.98	Total:	9.30
291	97	6.08		6.88	
		Total:	6.08	Total:	6.88
331	29	0.44		1.17	
	49	0.15		0.18	
	89	1.11		2.63	
	97	3.49		3.95	
		Total:	5.19	Total:	7.93

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
343	49	1.14		1.35	
		Total:	1.14	Total:	1.35
352	24	15.17		29.38	
	29	775.34		2063.16	
	49	0.03		0.04	
	94	18.39		20.80	
	97	9.72		11.00	
		Total:	818.65	Total:	2124.38
441	29	624.38		1661.46	
	49	47.36		56.17	
		Total:	671.74	Total:	1717.63
461	28	0.04		0.07	
	34	30.23		82.57	
	48	26.78		63.59	
	97	0.80		0.90	
		Total:	57.85	Total:	147.13
491	29	0.00		0.00	
	35	1.60		3.29	
	49	0.37		0.44	
	97	80.88		91.49	
		Total:	82.85	Total:	95.22
512	29	198.86		529.16	
	49	0.17		0.20	
	97	52.21		59.06	
		Total:	251.24	Total:	588.42
513	49	1.54		1.83	
	97	16.00		18.10	
		Total:	17.54	Total:	19.93
551	20	0.11		0.18	
	29	2.06		5.48	
	94	0.01		0.01	
	97	0.02		0.02	
		Total:	2.20	Total:	5.69
581	89	0.07		0.17	
		Total:	0.07	Total:	0.17
611	28	0.41		0.00	
	29	54.77		0.00	
	41	2.52		0.00	
	49	21.06		0.00	
	94	42.97		0.00	
	97	86.40		0.00	
		Total:	208.13	Total:	0.00

COUNTY: SOLANO

SORT: By waste number

Page: 5

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
711	97	29.60		33.48	
		Total:	29.60	Total:	33.48
725	29	0.22		0.59	
		Total:	0.22	Total:	0.59
731	49	25.12		29.79	
	97	3.78		4.28	
		Total:	28.90	Total:	34.07
791	97	0.39		0.44	
		Total:	0.39	Total:	0.44
			-----		-----
		Total:	14424.80	Total:	33910.36

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	461.48		659.37	
	223	795.94		2042.48	
	Total:		1257.42	Total:	2701.85
HALOGENATED SOLVENTS	211	19.51		30.27	
	Total:		19.51	Total:	30.27
NON-HALOGENATED SOLVENTS	212	3.95		8.69	
	213	2.31		6.15	
	214	138.67		248.58	
	Total:		144.93	Total:	263.42
ORGANIC LIQUIDS	133	0.75		0.85	
	134	15.94		22.24	
	343	1.14		1.35	
	Total:		17.83	Total:	24.44
DIOXINS	261	283.64		334.11	
	731	28.90		34.07	
	Total:		312.54	Total:	368.18
OILY SLUDGES	222	4938.93		12889.66	
	352	818.65		2124.38	
	Total:		5757.58	Total:	15014.04
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	158.28		390.83	
	252	6.94		18.28	
	491	82.85		95.22	
	Total:		248.07	Total:	504.33
DYE & PAINT SLUDGES AND RESINS	271	63.14		172.22	
	281	3.98		9.30	
	291	6.08		6.88	
	461	57.85		147.13	
	Total:		131.05	Total:	335.53
METAL-CONTAINING SLUDGES	171	0.07		0.08	
	Total:		0.07	Total:	0.08
METAL-CONTAINING LIQUIDS	111	243.63		567.23	
	121	55.37		116.17	
	132	739.78		1898.32	
	725	0.22		0.59	
	Total:		1039.00	Total:	2582.31
CYANIDE & METAL LIQUIDS	711	29.60		33.48	
	Total:		29.60	Total:	33.48
NON-METALLIC INORGANIC LIQUIDS	122	229.47		576.91	
	123	100.45		113.63	

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	135	32.72		63.33	
	791	0.39		0.44	
		Total:	363.03	Total:	754.31
NON-METALLIC INORGANIC SLUDGES	441	671.74		1717.63	
		Total:	671.74	Total:	1717.63
SOIL	611	208.13		0.00	
		Total:	208.13	Total:	0.00
MISCELLANEOUS WASTES	141	460.05		1223.75	
	151	410.37		0.00	
	161	1703.45		4532.84	
	162	216.33		562.12	
	181	1157.86		2639.64	
	331	5.19		7.93	
	512	251.24		588.42	
	513	17.54		19.93	
	551	2.20		5.69	
	581	0.07		0.17	
		Total:	4224.30	Total:	9580.49

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
17	151	2.52		0.00	
		Total:	2.52	Total:	0.00
20	111	18.69		29.97	
	214	3.85		6.17	
	221	19.80		31.75	
	551	0.11		0.18	
		Total:	42.45	Total:	68.07
24	111	27.10		52.48	
	121	52.94		102.52	
	352	15.17		29.38	
		Total:	95.21	Total:	184.38
25	211	1.35		2.61	
	212	0.22		0.43	
		Total:	1.57	Total:	3.04
28	132	0.20		0.36	
	134	5.56		9.93	
	162	15.47		27.64	
	181	0.62		1.11	
	211	4.17		7.45	
	212	1.90		3.39	
	214	6.24		11.15	
	221	9.79		17.49	
	223	33.42		59.71	
	241	42.96		76.76	
	461	0.04		0.07	
	611	0.41		0.00	
		Total:	120.78	Total:	215.06
29	122	205.29		546.27	
	132	693.64		1845.76	
	135	16.68		44.39	
	141	459.76		1223.41	
	151	256.16		0.00	
	161	1703.45		4532.84	
	162	200.86		534.48	
	181	852.92		2269.60	
	212	1.83		4.87	
	213	2.31		6.15	
	214	2.29		6.09	
	221	0.45		1.20	
	222	4687.64		12473.69	
	223	701.92		1867.79	
	241	13.00		34.59	
	252	6.33		16.84	
	331	0.44		1.17	
	352	775.34		2063.16	
	441	624.38		1661.46	
	491	0.00		0.00	
	512	198.86		529.16	
	551	2.06		5.48	
	611	54.77		0.00	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	725	0.22		0.59	
		Total:	11460.60	Total:	29668.99
34	211	2.74		7.48	
	214	32.98		90.08	
	221	71.29		194.73	
	222	35.86		97.95	
	223	28.79		78.64	
	241	102.32		279.48	
	271	62.99		172.05	
	461	30.23		82.57	
		Total:	367.20	Total:	1002.98
35	111	5.42		11.15	
	214	1.82		3.74	
	491	1.60		3.29	
		Total:	8.84	Total:	18.18
36	111	37.52		298.17	
	121	1.60		12.71	
		Total:	39.12	Total:	310.88
41	222	4.17		17.56	
	611	2.52		0.00	
		Total:	6.69	Total:	17.56
42	181	8.29		17.98	
		Total:	8.29	Total:	17.98
48	461	26.78		63.59	
		Total:	26.78	Total:	63.59
49	111	4.26		5.05	
	132	4.17		4.95	
	134	10.34		12.26	
	135	14.59		17.30	
	141	0.29		0.34	
	181	293.47		348.05	
	214	1.37		1.62	
	221	121.68		144.31	
	222	0.45		0.53	
	223	6.53		7.74	
	261	10.05		11.92	
	331	0.15		0.18	
	343	1.14		1.35	
	352	0.03		0.04	
	441	47.36		56.17	
	491	0.37		0.44	
	512	0.17		0.20	
	513	1.54		1.83	
	611	21.06		0.00	
	731	25.12		29.79	
		Total:	564.14	Total:	644.07
55	214	25.98		51.11	
	222	40.27		79.23	
		Total:	66.25	Total:	130.34
75	214	8.13		12.40	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	222	70.46		107.49	
		Total:	78.59	Total:	119.89
80	261	24.07		39.92	
		Total:	24.07	Total:	39.92
82	151	0.60		0.00	
	214	0.44		0.57	
		Total:	1.04	Total:	0.57
89	122	2.66		6.30	
	214	2.25		5.33	
	221	0.10		0.24	
	252	0.61		1.44	
	281	3.88		9.19	
	331	1.11		2.63	
	581	0.07		0.17	
		Total:	10.68	Total:	25.30
94	221	0.40		0.45	
	352	18.39		20.80	
	551	0.01		0.01	
	611	42.97		0.00	
		Total:	61.77	Total:	21.26
97	111	150.64		170.41	
	121	0.83		0.94	
	122	21.52		24.34	
	123	100.45		113.63	
	132	41.77		47.25	
	133	0.75		0.85	
	134	0.04		0.05	
	135	1.45		1.64	
	151	151.09		0.00	
	171	0.07		0.08	
	181	2.56		2.90	
	211	11.25		12.73	
	214	53.32		60.32	
	221	237.97		269.20	
	222	100.08		113.21	
	223	25.28		28.60	
	261	249.52		282.27	
	271	0.15		0.17	
	281	0.10		0.11	
	291	6.08		6.88	
	331	3.49		3.95	
	352	9.72		11.00	
	461	0.80		0.90	
	491	80.88		91.49	
	512	52.21		59.06	
	513	16.00		18.10	
	551	0.02		0.02	
	611	86.40		0.00	
	711	29.60		33.48	
	731	3.78		4.28	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	791	0.39		0.44	
		Total:	1438.21	Total:	1358.30

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Construction	151	2.52		0.00	
		Total:	2.52	Total:	0.00
Manufacturing	111	88.73		391.77	
	121	54.54		115.23	
	122	205.29		546.27	
	132	693.84		1846.12	
	134	5.56		9.93	
	135	16.68		44.39	
	141	459.76		1223.41	
	151	256.16		0.00	
	161	1703.45		4532.84	
	162	216.33		562.12	
	181	853.54		2270.71	
	211	8.26		17.54	
	212	3.95		8.69	
	213	2.31		6.15	
	214	47.18		117.23	
	221	101.33		245.17	
	222	4723.50		12571.64	
	223	764.13		2006.14	
	241	158.28		390.83	
	252	6.33		16.84	
	271	62.99		172.05	
	331	0.44		1.17	
	352	790.51		2092.54	
	441	624.38		1661.46	
	461	30.27		82.64	
	491	1.60		3.29	
	512	198.86		529.16	
	551	2.17		5.66	
	611	55.18		0.00	
	725	0.22		0.59	
		Total:	12135.77	Total:	31471.58
Transportation, Communication, Utilities	111	4.26		5.05	
	132	4.17		4.95	
	134	10.34		12.26	
	135	14.59		17.30	
	141	0.29		0.34	
	181	301.76		366.03	
	214	1.37		1.62	
	221	121.68		144.31	
	222	4.62		18.09	
	223	6.53		7.74	
	261	10.05		11.92	
	331	0.15		0.18	
	343	1.14		1.35	
	352	0.03		0.04	
	441	47.36		56.17	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	461	26.78		63.59	
	491	0.37		0.44	
	512	0.17		0.20	
	513	1.54		1.83	
	611	23.58		0.00	
	731	25.12		29.79	
		Total:	605.90	Total:	743.20
Retail Trade	214	25.98		51.11	
	222	40.27		79.23	
		Total:	66.25	Total:	130.34
Services	122	2.66		6.30	
	151	0.60		0.00	
	214	10.82		18.30	
	221	0.10		0.24	
	222	70.46		107.49	
	252	0.61		1.44	
	261	24.07		39.92	
	281	3.88		9.19	
	331	1.11		2.63	
	581	0.07		0.17	
		Total:	114.38	Total:	185.68
Government	111	150.64		170.41	
	121	0.83		0.94	
	122	21.52		24.34	
	123	100.45		113.63	
	132	41.77		47.25	
	133	0.75		0.85	
	134	0.04		0.05	
	135	1.45		1.64	
	151	151.09		0.00	
	171	0.07		0.08	
	181	2.56		2.90	
	211	11.25		12.73	
	214	53.32		60.32	
	221	238.37		269.65	
	222	100.08		113.21	
	223	25.28		28.60	
	261	249.52		282.27	
	271	0.15		0.17	
	281	0.10		0.11	
	291	6.08		6.88	
	331	3.49		3.95	
	352	28.11		31.80	
	461	0.80		0.90	
	491	80.88		91.49	
	512	52.21		59.06	
	513	16.00		18.10	

COUNTY: SOLANO

SORT: By SIC-Code group

Page: 3

INDUSTRIAL
SECTOR

WASTE #

QUANTITY
(TONS, 1986)TOTALS
(1986)QUANTITY
(TONS, 2000)TOTALS
(2000)

551	0.03
611	129.37
711	29.60
731	3.78
791	0.39

0.03
0.00
33.48
4.28
0.44

Total: 1499.98

Total: 1379.56

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
17	MISCELLANEOUS WASTES	2.52		0.00	
	Total:		2.52	Total:	0.00
20	WASTE OIL	19.80		31.75	
	NON-HALOGENATED SOLVENTS	3.85		6.17	
	METAL-CONTAINING LIQUIDS	18.69		29.97	
	MISCELLANEOUS WASTES	0.11		0.18	
	Total:		42.45	Total:	68.07
24	OILY SLUDGES	15.17		29.38	
	METAL-CONTAINING LIQUIDS	80.04		155.00	
	Total:		95.21	Total:	184.38
25	HALOGENATED SOLVENTS	1.35		2.61	
	NON-HALOGENATED SOLVENTS	0.22		0.43	
	Total:		1.57	Total:	3.04
28	WASTE OIL	43.21		77.20	
	HALOGENATED SOLVENTS	4.17		7.45	
	NON-HALOGENATED SOLVENTS	8.14		14.54	
	ORGANIC LIQUIDS	5.56		9.93	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	42.96		76.76	
	DYE & PAINT SLUDGES AND RESINS	0.04		0.07	
	METAL-CONTAINING LIQUIDS	0.20		0.36	
	SOIL	0.41		0.00	
	MISCELLANEOUS WASTES	16.09		28.75	
	Total:		120.78	Total:	215.06
29	WASTE OIL	702.37		1868.99	
	NON-HALOGENATED SOLVENTS	6.43		17.11	
	OILY SLUDGES	5462.98		14536.85	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	19.33		51.43	
	METAL-CONTAINING LIQUIDS	693.86		1846.35	
	NON-METALLIC INORGANIC LIQUIDS	221.97		590.66	
	NON-METALLIC INORGANIC SLUDGES	624.38		1661.46	
	SOIL	54.77		0.00	
	MISCELLANEOUS WASTES	3674.51		9777.78	
	Total:		11460.60	Total:	30350.63
34	WASTE OIL	100.08		273.37	
	HALOGENATED SOLVENTS	2.74		7.48	
	NON-HALOGENATED SOLVENTS	32.98		90.08	
	OILY SLUDGES	35.86		97.95	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	102.32		279.48	
	DYE & PAINT SLUDGES AND RESINS	93.22		254.62	
	Total:		367.20	Total:	1002.98
35	NON-HALOGENATED SOLVENTS	1.82		3.74	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.60		3.29	
	METAL-CONTAINING LIQUIDS	44.54		322.03	
	Total:		47.96	Total:	329.06
41	OILY SLUDGES	4.17		17.56	
	SOIL	2.52		0.00	
	Total:		6.69	Total:	17.56
42	MISCELLANEOUS WASTES	8.29		17.98	
	Total:		8.29	Total:	17.98
48	DYE & PAINT SLUDGES AND RESINS	26.78		63.59	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	26.78	Total:	63.59
49	WASTE OIL	128.21		152.05	
	NON-HALOGENATED SOLVENTS	1.37		1.62	
	ORGANIC LIQUIDS	11.48		13.61	
	DIOXINS	35.17		41.71	
	OILY SLUDGES	0.48		0.57	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.37		0.44	
	METAL-CONTAINING LIQUIDS	8.43		10.00	
	NON-METALLIC INORGANIC LIQUIDS	14.59		17.30	
	NON-METALLIC INORGANIC SLUDGES	47.36		56.17	
	SOIL	21.06		0.00	
	MISCELLANEOUS WASTES	295.62		350.60	
		Total:	564.14	Total:	644.07
55	NON-HALOGENATED SOLVENTS	25.98		51.11	
	OILY SLUDGES	40.27		79.23	
		Total:	66.25	Total:	130.34
75	NON-HALOGENATED SOLVENTS	8.13		12.40	
	OILY SLUDGES	70.46		107.49	
		Total:	78.59	Total:	119.89
80	DIOXINS	24.07		39.92	
		Total:	24.07	Total:	39.92
82	NON-HALOGENATED SOLVENTS	0.44		0.57	
	MISCELLANEOUS WASTES	0.60		0.00	
		Total:	1.04	Total:	0.57
89	WASTE OIL	0.10		0.24	
	NON-HALOGENATED SOLVENTS	2.25		5.33	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.61		1.44	
	DYE & PAINT SLUDGES AND RESINS	3.88		9.19	
	NON-METALLIC INORGANIC LIQUIDS	2.66		6.30	
	MISCELLANEOUS WASTES	1.18		2.80	
		Total:	10.68	Total:	25.30
94	WASTE OIL	0.40		0.45	
	OILY SLUDGES	18.39		20.80	
	SOIL	42.97		0.00	
	MISCELLANEOUS WASTES	0.01		0.01	
		Total:	61.77	Total:	21.26
97	WASTE OIL	263.25		297.80	
	HALOGENATED SOLVENTS	11.25		12.73	
	NON-HALOGENATED SOLVENTS	53.32		60.32	
	ORGANIC LIQUIDS	0.79		0.90	
	DIOXINS	253.30		286.55	
	OILY SLUDGES	109.80		124.21	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	80.88		91.49	
	DYE & PAINT SLUDGES AND RESINS	7.13		8.06	
	METAL-CONTAINING SLUDGES	0.07		0.08	
	METAL-CONTAINING LIQUIDS	193.24		218.60	
	CYANIDE & METAL LIQUIDS	29.60		33.48	
	NON-METALLIC INORGANIC LIQUIDS	123.81		140.05	
	SOIL	86.40		0.00	
	MISCELLANEOUS WASTES	225.37		0.00	
		Total:	1438.21	Total:	1274.27

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN SOLANO
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	0	0	0
Agriculture & Mining	0	0	0
Construction	0	0	0
Manufacturing	31,472	28,324	18,883
Transport, Communication, Utilities	743	669	446
Wholesale Trade	0	0	0
Retail Trade	130	117	78
Finance, Insurance, & Real Estate	0	0	0
Services	186	167	111
Government	1,380	1,242	828
TOTALS	33,910	30,519	20,346

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN SOLANO
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	2,702	2,432	1,621
Halogenated Solvents	30	27	18
Non-halogenated Solvents	263	237	158
Organic Liquids	24	22	15
Pesticides	0	0	0
Dioxins	368	331	221
Oily Sludges	15,014	13,513	9,008
Halogenated Organic Sludges & Solids	0	0	0
Non-halogenated Organic Sludges&Solids	504	454	303
Dye & Paint Sludges & Resins	336	302	201
Metal-Containing Sludges	*	*	*
Metal-Containing Liquids	2,582	2,324	1,549
Cyanide & Metal Liquids	33	30	20
Non-metallic Inorganic Liquids	754	679	453
Non-metallic Inorganic Sludges	1,718	1,546	1,031
Contaminated Soil	0	0	0
Miscellaneous Wastes	9,580	8,622	5,748
TOTALS	33,910	30,519	20,346

* = less than one ton, but greater than zero

9/1/88

COUNTY: SONOMA

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	27	3.20		6.48	
	34	120.30		217.86	
	36	0.67		2.34	
	38	2.47		6.73	
	49	8.71		12.95	
		Total:	135.35	Total:	246.36
112	28	0.45		0.73	
	36	1.14		3.98	
	38	0.45		1.23	
		Total:	2.04	Total:	5.94
113	36	1.14		3.98	
	49	0.12		0.18	
		Total:	1.26	Total:	4.16
121	38	173.14		471.96	
		Total:	173.14	Total:	471.96
122	49	0.02		0.03	
		Total:	0.02	Total:	0.03
123	36	0.02		0.07	
	49	0.91		1.35	
	94	0.02		0.02	
		Total:	0.95	Total:	1.44
131	38	0.20		0.55	
		Total:	0.20	Total:	0.55
132	30	8.34		9.55	
	36	55.50		193.79	
	38	190.03		518.00	
		Total:	253.87	Total:	721.34
133	24	13.06		17.62	
	49	0.02		0.03	
	55	1.66		2.94	
		Total:	14.74	Total:	20.59
134	38	7.08		19.30	
		Total:	7.08	Total:	19.30
135	36	42.90		149.80	
	49	7631.64		11343.40	
		Total:	7674.54	Total:	11493.20
181	34	0.84		1.52	
	36	102.09		356.47	
	38	26.76		72.94	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	4252.84		6321.27	
	75	0.05		0.07	
	80	0.02		0.03	
	97	14.32		16.64	
		Total:	4396.92	Total:	6768.94
211	27	0.45		0.91	
	28	8.88		14.37	
	35	0.67		1.09	
	36	2.27		7.93	
	38	62.18		169.50	
	49	104.43		155.22	
	75	0.83		1.13	
		Total:	179.71	Total:	350.15
212	28	0.88		1.42	
	36	0.45		1.57	
	38	0.45		1.23	
	82	1.19		1.90	
		Total:	2.97	Total:	6.12
213	38	0.20		0.55	
	49	1600.51		2378.94	
	75	3.99		5.42	
	79	0.84		1.28	
	89	0.22		0.51	
		Total:	1605.76	Total:	2386.70
214	16	2.52		4.51	
	24	13.25		17.88	
	27	2.73		5.53	
	35	11.84		19.27	
	36	1.58		5.52	
	37	2.93		3.74	
	38	87.79		239.31	
	49	7.33		10.90	
	55	3.14		5.56	
	63	0.91		1.76	
	73	12.09		28.28	
	75	18.47		25.09	
	79	2.52		3.84	
	89	0.16		0.37	
		Total:	167.26	Total:	371.56
221	24	1.66		2.24	
	28	230.65		373.33	
	35	0.43		0.70	
	38	16.99		46.31	
	49	226.12		336.10	
	82	23.56		37.54	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	94	21.55		25.04	
		Total:	520.96	Total:	821.26
222	28	6.25		10.12	
		Total:	6.25	Total:	10.12
223	38	20.46		55.77	
	49	191.19		284.18	
	75	0.50		0.68	
	91	3.78		4.39	
		Total:	215.93	Total:	345.02
241	35	0.20		0.33	
	38	16.68		45.47	
		Total:	16.88	Total:	45.80
261	49	149.31		221.93	
	75	3.40		4.62	
	80	13.06		21.34	
	97	0.72		0.84	
		Total:	166.49	Total:	248.73
272	49	1.25		1.86	
		Total:	1.25	Total:	1.86
331	27	0.37		0.75	
	38	16.26		44.32	
		Total:	16.63	Total:	45.07
341	38	0.41		1.12	
		Total:	0.41	Total:	1.12
343	38	3.07		8.37	
	49	4.63		6.88	
		Total:	7.70	Total:	15.25
351	49	1.05		1.56	
		Total:	1.05	Total:	1.56
352	49	4.32		6.42	
		Total:	4.32	Total:	6.42
421	38	165.80		451.95	
		Total:	165.80	Total:	451.95
441	49	20841.89		30978.64	
		Total:	20841.89	Total:	30978.64
461	17	0.21		0.38	
	24	10.54		14.22	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	38	28.04		76.43	
		Total:	38.79	Total:	91.03
491	28	22.93		37.11	
	49	32.79		48.74	
		Total:	55.72	Total:	85.85
512	20	2.08		2.60	
	27	0.10		0.20	
	49	18.71		27.81	
	75	6.44		8.75	
	94	2.08		2.42	
		Total:	29.41	Total:	41.78
513	49	2.93		4.36	
	75	0.05		0.07	
	89	0.00		0.00	
		Total:	2.98	Total:	4.43
541	27	1.89		3.83	
		Total:	1.89	Total:	3.83
551	38	1.30		3.54	
	42	0.42		0.45	
	49	0.38		0.56	
	82	2.35		3.74	
	89	0.45		1.05	
		Total:	4.90	Total:	9.34
611	38	33.70		0.00	
	49	17.74		0.00	
	55	114.61		0.00	
	75	15.17		0.00	
	91	4.00		0.00	
		Total:	185.22	Total:	0.00
612	91	42.29		49.13	
		Total:	42.29	Total:	49.13
711	38	7.03		19.16	
		Total:	7.03	Total:	19.16
726	34	46.25		83.76	
		Total:	46.25	Total:	83.76
731	49	40.75		60.57	
		Total:	40.75	Total:	60.57
			-----		-----
		Total:	37036.60	Total:	56290.02

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	520.96		821.26	
	223	215.93		345.02	
	Total:		736.89	Total:	1166.28
HALOGENATED SOLVENTS	211	179.71		350.15	
	Total:		179.71	Total:	350.15
NON-HALOGENATED SOLVENTS	212	2.97		6.12	
	213	1605.76		2386.70	
	214	167.26		371.56	
	Total:		1775.99	Total:	2764.38
ORGANIC LIQUIDS	133	14.74		20.59	
	134	7.08		19.30	
	341	0.41		1.12	
	343	7.70		15.25	
	Total:		29.93	Total:	56.26
DIOXINS	261	166.49		248.73	
	731	40.75		60.57	
	Total:		207.24	Total:	309.30
OILY SLUDGES	222	6.25		10.12	
	352	4.32		6.42	
	Total:		10.57	Total:	16.54
HALOGENATED ORGANIC SLUDGES & SOLIDS	351	1.05		1.56	
	Total:		1.05	Total:	1.56
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	16.88		45.80	
	491	55.72		85.85	
	Total:		72.60	Total:	131.65
DYE & PAINT SLUDGES AND RESINS	272	1.25		1.86	
	461	38.79		91.03	
	Total:		40.04	Total:	92.89
METAL-CONTAINING LIQUIDS	111	135.35		246.36	
	121	173.14		471.96	
	132	253.87		721.34	
	726	46.25		83.76	
	Total:		608.61	Total:	1523.42
CYANIDE & METAL LIQUIDS	711	7.03		19.16	
	Total:		7.03	Total:	19.16
NON-METALLIC INORGANIC LIQUIDS	112	2.04		5.94	
	113	1.26		4.16	
	122	0.02		0.03	
	123	0.95		1.44	

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	131	0.20		0.55	
	135	7674.54		11493.20	
		Total:	7679.01	Total:	11505.32
NON-METALLIC INORGANIC SLUDGES	421	165.80		451.95	
	441	20841.89		30978.64	
		Total:	21007.69	Total:	31430.59
SOIL	611	185.22		0.00	
		Total:	185.22	Total:	0.00
MISCELLANEOUS WASTES	181	4396.92		6768.94	
	331	16.63		45.07	
	512	29.41		41.78	
	513	2.98		4.43	
	541	1.89		3.83	
	551	4.90		9.34	
	612	42.29		49.13	
		Total:	4495.02	Total:	6922.52

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
16	214	2.52		4.51	
		Total:	2.52	Total:	4.51
17	461	0.21		0.38	
		Total:	0.21	Total:	0.38
20	512	2.08		2.60	
		Total:	2.08	Total:	2.60
24	133	13.06		17.62	
	214	13.25		17.88	
	221	1.66		2.24	
	461	10.54		14.22	
		Total:	38.51	Total:	51.96
27	111	3.20		6.48	
	211	0.45		0.91	
	214	2.73		5.53	
	331	0.37		0.75	
	512	0.10		0.20	
	541	1.89		3.83	
		Total:	8.74	Total:	17.70
28	112	0.45		0.73	
	211	8.88		14.37	
	212	0.88		1.42	
	221	230.65		373.33	
	222	6.25		10.12	
	491	22.93		37.11	
		Total:	270.04	Total:	437.08
30	132	8.34		9.55	
		Total:	8.34	Total:	9.55
34	111	120.30		217.86	
	181	0.84		1.52	
	726	46.25		83.76	
		Total:	167.39	Total:	303.14
35	211	0.67		1.09	
	214	11.84		19.27	
	221	0.43		0.70	
	241	0.20		0.33	
		Total:	13.14	Total:	21.39
36	111	0.67		2.34	
	112	1.14		3.98	
	113	1.14		3.98	
	123	0.02		0.07	
	132	55.50		193.79	
	135	42.90		149.80	
	181	102.09		356.47	
	211	2.27		7.93	
	212	0.45		1.57	
	214	4.51		9.26	
		Total:	210.69	Total:	729.19
38	111	2.47		6.73	
	112	0.45		1.23	
	121	173.14		471.96	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	131	0.20		0.55	
	132	190.03		518.00	
	134	7.08		19.30	
	181	26.76		72.94	
	211	62.18		169.50	
	212	0.45		1.23	
	213	0.20		0.55	
	214	87.79		239.31	
	221	16.99		46.31	
	223	20.46		55.77	
	241	16.68		45.47	
	331	16.26		44.32	
	341	0.41		1.12	
	343	3.07		8.37	
	421	165.80		451.95	
	461	28.04		76.43	
	551	1.30		3.54	
	611	33.70		0.00	
	711	7.03		19.16	
		Total:	860.49	Total:	2253.74
42	551	0.42		0.45	
		Total:	0.42	Total:	0.45
49	111	8.71		12.95	
	113	0.12		0.18	
	122	0.02		0.03	
	123	0.91		1.35	
	133	0.02		0.03	
	135	7631.64		11343.40	
	181	4252.84		6321.27	
	211	104.43		155.22	
	213	1600.51		2378.94	
	214	7.33		10.90	
	221	226.12		336.10	
	223	191.19		284.18	
	261	149.31		221.93	
	272	1.25		1.86	
	343	4.63		6.88	
	351	1.05		1.56	
	352	4.32		6.42	
	441	20841.89		30978.64	
	491	32.79		48.74	
	512	18.71		27.81	
	513	2.93		4.36	
	551	0.38		0.56	
	611	17.74		0.00	
	731	40.75		60.57	
		Total:	35139.59	Total:	52203.88
55	133	1.66		2.94	
	214	3.14		5.56	
	611	114.61		0.00	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	119.41	Total:	8.50
63	214	13.00		30.04	
		Total:	13.00	Total:	30.04
75	181	0.05		0.07	
	211	0.83		1.13	
	213	3.99		5.42	
	214	18.47		25.09	
	223	0.50		0.68	
	261	3.40		4.62	
	512	6.44		8.75	
	513	0.05		0.07	
	611	15.17		0.00	
		Total:	48.90	Total:	45.83
79	213	0.84		1.28	
	214	2.52		3.84	
		Total:	3.36	Total:	5.12
80	181	0.02		0.03	
	261	13.06		21.34	
		Total:	13.08	Total:	21.37
82	212	1.19		1.90	
	221	23.56		37.54	
	551	2.35		3.74	
		Total:	27.10	Total:	43.18
89	213	0.22		0.51	
	214	0.16		0.37	
	513	0.00		0.00	
	551	0.45		1.05	
		Total:	0.83	Total:	1.93
91	223	3.78		4.39	
	611	4.00		0.00	
	612	42.29		49.13	
		Total:	50.07	Total:	53.52
94	123	0.02		0.02	
	221	21.55		25.04	
	512	2.08		2.42	
		Total:	23.65	Total:	27.48
97	181	14.32		16.64	
	261	0.72		0.84	
		Total:	15.04	Total:	17.48

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Construction	214	2.52		4.51	
	461	0.21		0.38	
		Total:	2.73	Total:	4.89
Manufacturing	111	126.64		233.41	
	112	2.04		5.94	
	113	1.14		3.98	
	121	173.14		471.96	
	123	0.02		0.07	
	131	0.20		0.55	
	132	253.87		721.34	
	133	13.06		17.62	
	134	7.08		19.30	
	135	42.90		149.80	
	181	129.69		430.93	
	211	74.45		193.80	
	212	1.78		4.22	
	213	0.20		0.55	
	214	120.12		291.25	
	221	249.73		422.58	
	222	6.25		10.12	
	223	20.46		55.77	
	241	16.88		45.80	
	331	16.63		45.07	
	341	0.41		1.12	
	343	3.07		8.37	
	421	165.80		451.95	
	461	38.58		90.65	
	491	22.93		37.11	
	512	2.18		2.80	
	541	1.89		3.83	
	551	1.30		3.54	
	611	33.70		0.00	
	711	7.03		19.16	
	726	46.25		83.76	
		Total:	1579.42	Total:	3826.35
Transportation, Communication, Utilities	111	8.71		12.95	
	113	0.12		0.18	
	122	0.02		0.03	
	123	0.91		1.35	
	133	0.02		0.03	
	135	7631.64		11343.40	
	181	4252.84		6321.27	
	211	104.43		155.22	
	213	1600.51		2378.94	
	214	7.33		10.90	
	221	226.12		336.10	
	223	191.19		284.18	
	261	149.31		221.93	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	272	1.25		1.86	
	343	4.63		6.88	
	351	1.05		1.56	
	352	4.32		6.42	
	441	20841.89		30978.64	
	491	32.79		48.74	
	512	18.71		27.81	
	513	2.93		4.36	
	551	0.80		1.01	
	611	17.74		0.00	
	731	40.75		60.57	
		Total:	35140.01	Total:	52204.33
Retail Trade	133	1.66		2.94	
	214	3.14		5.56	
	611	114.61		0.00	
		Total:	119.41	Total:	8.50
Finance, Insurance & Real Estate	214	0.91		1.76	
		Total:	0.91	Total:	1.76
Services	181	0.07		0.10	
	211	0.83		1.13	
	212	1.19		1.90	
	213	5.05		7.21	
	214	33.24		57.58	
	221	23.56		37.54	
	223	0.50		0.68	
	261	16.46		25.96	
	512	6.44		8.75	
	513	0.05		0.07	
	551	2.80		4.79	
	611	15.17		0.00	
		Total:	105.36	Total:	145.71
Government	123	0.02		0.02	
	181	14.32		16.64	
	221	21.55		25.04	
	223	3.78		4.39	
	261	0.72		0.84	
	512	2.08		2.42	
	611	4.00		0.00	
	612	42.29		49.13	
		Total:	88.76	Total:	98.48

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
16	NON-HALOGENATED SOLVENTS	2.52		4.51	
	Total:		2.52	Total:	4.51
17	DYE & PAINT SLUDGES AND RESINS	0.21		0.38	
	Total:		0.21	Total:	0.38
20	MISCELLANEOUS WASTES	2.08		2.60	
	Total:		2.08	Total:	2.60
24	WASTE OIL	1.66		2.24	
	NON-HALOGENATED SOLVENTS	13.25		17.88	
	ORGANIC LIQUIDS	13.06		17.62	
	DYE & PAINT SLUDGES AND RESINS	10.54		14.22	
	Total:		38.51	Total:	51.96
27	HALOGENATED SOLVENTS	0.45		0.91	
	NON-HALOGENATED SOLVENTS	2.73		5.53	
	METAL-CONTAINING LIQUIDS	3.20		6.48	
	MISCELLANEOUS WASTES	2.36		4.78	
	Total:		8.74	Total:	17.70
28	WASTE OIL	230.65		373.33	
	HALOGENATED SOLVENTS	8.88		14.37	
	NON-HALOGENATED SOLVENTS	0.88		1.42	
	OILY SLUDGES	6.25		10.12	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	22.93		37.11	
	NON-METALLIC INORGANIC LIQUIDS	0.45		0.73	
	Total:		270.04	Total:	437.08
30	METAL-CONTAINING LIQUIDS	174.89		311.17	
	Total:		174.89	Total:	311.17
34	MISCELLANEOUS WASTES	0.84		1.52	
	Total:		0.84	Total:	1.52
35	WASTE OIL	0.43		0.70	
	HALOGENATED SOLVENTS	0.67		1.09	
	NON-HALOGENATED SOLVENTS	11.84		19.27	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.20		0.33	
	Total:		13.14	Total:	21.39
36	HALOGENATED SOLVENTS	2.27		7.93	
	NON-HALOGENATED SOLVENTS	2.03		7.09	
	METAL-CONTAINING LIQUIDS	56.17		196.13	
	NON-METALLIC INORGANIC LIQUIDS	45.20		157.83	
	MISCELLANEOUS WASTES	102.09		356.47	
	Total:		207.76	Total:	725.45
37	NON-HALOGENATED SOLVENTS	2.93		3.74	
	Total:		2.93	Total:	3.74
38	WASTE OIL	37.45		102.08	
	HALOGENATED SOLVENTS	62.18		169.50	
	NON-HALOGENATED SOLVENTS	88.44		241.09	
	ORGANIC LIQUIDS	10.56		28.79	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	16.68		45.47	
	DYE & PAINT SLUDGES AND RESINS	28.04		76.43	
	METAL-CONTAINING LIQUIDS	365.64		996.69	
	CYANIDE & METAL LIQUIDS	7.03		19.16	
	NON-METALLIC INORGANIC LIQUIDS	0.65		1.78	
	NON-METALLIC INORGANIC SLUDGES	165.80		451.95	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	SOIL	33.70		0.00	
	MISCELLANEOUS WASTES	44.74		121.25	
	Total:		860.91	Total:	2254.19
49	WASTE OIL	417.31		620.28	
	HALOGENATED SOLVENTS	104.43		155.22	
	NON-HALOGENATED SOLVENTS	1607.84		2389.84	
	ORGANIC LIQUIDS	4.65		6.91	
	DIOXINS	190.06		282.50	
	OILY SLUDGES	4.32		6.42	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	1.05		1.56	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	32.79		48.74	
	DYE & PAINT SLUDGES AND RESINS	1.25		1.86	
	METAL-CONTAINING LIQUIDS	8.71		12.95	
	NON-METALLIC INORGANIC LIQUIDS	7632.69		11344.96	
	NON-METALLIC INORGANIC SLUDGES	20841.89		30978.64	
	SOIL	17.74		0.00	
	MISCELLANEOUS WASTES	4274.86		6354.00	
	Total:		35139.59	Total:	52203.88
55	NON-HALOGENATED SOLVENTS	3.14		5.56	
	ORGANIC LIQUIDS	1.66		2.94	
	SOIL	114.61		0.00	
	Total:		119.41	Total:	8.50
63	NON-HALOGENATED SOLVENTS	13.00		30.04	
	Total:		13.00	Total:	30.04
75	WASTE OIL	0.50		0.68	
	HALOGENATED SOLVENTS	0.83		1.13	
	NON-HALOGENATED SOLVENTS	22.46		30.51	
	DIOXINS	3.40		4.62	
	SOIL	15.17		0.00	
	MISCELLANEOUS WASTES	6.54		8.89	
	Total:		48.90	Total:	45.83
79	NON-HALOGENATED SOLVENTS	3.36		5.12	
	Total:		3.36	Total:	5.12
80	DIOXINS	13.06		21.34	
	MISCELLANEOUS WASTES	0.02		0.03	
	Total:		13.08	Total:	21.37
82	WASTE OIL	23.56		37.54	
	NON-HALOGENATED SOLVENTS	1.19		1.90	
	MISCELLANEOUS WASTES	2.35		3.74	
	Total:		27.10	Total:	43.18
89	NON-HALOGENATED SOLVENTS	0.38		0.88	
	MISCELLANEOUS WASTES	0.45		1.05	
	Total:		0.83	Total:	1.93
91	WASTE OIL	3.78		4.39	
	SOIL	4.00		0.00	
	MISCELLANEOUS WASTES	42.29		49.13	
	Total:		50.07	Total:	53.52
94	WASTE OIL	21.55		25.04	
	NON-METALLIC INORGANIC LIQUIDS	0.02		0.02	
	MISCELLANEOUS WASTES	2.08		2.42	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	23.65	Total:	27.48
97	DIOXINS	0.72		0.84	
	MISCELLANEOUS WASTES	14.32		16.64	
		Total:	15.04	Total:	17.48

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN SONOMA
COUNTY FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	0	0	0
Agriculture & Mining	0	0	0
Construction	5	4	3
Manufacturing	3,826	3,444	2,296
Transport, Communication, Utilities	52,204	46,984	31,323
Wholesale Trade	0	0	0
Retail Trade	9	8	5
Finance, Insurance, & Real Estate	2	2	1
Services	146	131	87
Government	98	89	59
TOTALS	56,290	50,661	33,774

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN SONOMA
COUNTY FOR THE YEAR 2000, USING THREE REDUCTIONS SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	1,166	1,050	700
Halogenated Solvents	350	315	210
Non-halogenated Solvents	2,764	2,488	1,659
Organic Liquids	56	51	34
Pesticides	0	0	0
Dioxins	309	278	186
Oily Sludges	17	15	10
Halogenated Organic Sludges & Solids	2	1	1
Non-halogenated Organic Sludges&Solids	132	118	79
Dye & Paint Sludges & Resins	93	84	56
Metal-Containing Sludges	0	0	0
Metal-Containing Liquids	1,523	1,371	914
Cyanide & Metal Liquids	19	17	11
Non-metallic Inorganic Liquids	11,505	10,355	6,903
Non-metallic Inorganic Sludges	31,431	28,288	18,858
Contaminated Soil	0	0	0
Miscellaneous Wastes	6,923	6,230	4,154
TOTALS	56,290	50,661	33,774

9/1/88

COUNTY: REGION

SORT: By waste number

Page: 1

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
111	10	5.01		1.98	
	20	20.29		31.61	
	24	27.10		52.48	
	26	0.02		0.02	
	27	44.04		84.20	
	28	800.22		1237.63	
	32	1.51		1.88	
	33	736.95		1039.41	
	34	4460.14		5024.42	
	35	1594.67		3545.81	
	36	2544.72		4707.49	
	37	626.97		614.57	
	38	75.55		212.96	
	39	0.22		0.62	
	42	2.30		3.42	
	44	0.22		0.34	
	45	4.98		8.77	
	48	93.82		152.49	
	49	780.10		962.16	
	51	0.90		1.44	
	59	15.25		24.09	
	60	40.45		57.42	
	73	374.11		852.41	
	75	7.50		10.15	
	76	3.88		5.15	
	80	1.15		1.68	
	82	0.22		0.31	
	89	0.00		0.00	
	94	0.00		0.00	
	95	0.22		0.24	
	96	0.07		0.08	
	97	220.15		247.98	
	99	303.50		303.50	
		Total:	12786.23	Total:	19186.71
112	20	0.12		0.14	
	22	0.35		0.47	
	28	213.36		343.06	
	29	16.90		23.08	
	32	56.80		69.56	
	33	29.11		36.08	
	34	251.48		278.28	
	35	40.87		89.97	
	36	1635.01		2477.97	
	37	12.01		11.76	
	38	1.61		4.50	
	42	0.36		0.52	
	49	600.43		730.30	
	50	0.08		0.14	
	73	12.48		27.01	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	76	157.36		216.26	
	79	0.00		0.00	
	80	0.14		0.19	
	82	5.81		8.65	
	91	0.00		0.00	
	94	5.05		5.78	
	95	9.74		11.08	
	96	0.62		0.67	
	97	7.15		7.72	
	99	13.22		13.22	
		Total:	3070.06	Total:	4356.41
113	22	0.92		1.22	
	28	5.61		8.70	
	29	7.58		10.35	
	31	0.22		0.24	
	32	0.45		0.56	
	33	17.93		23.02	
	35	256.52		563.71	
	36	145.42		196.20	
	37	8.94		8.76	
	38	0.26		0.74	
	45	0.05		0.09	
	49	22.72		27.85	
	50	0.47		0.71	
	61	0.22		0.37	
	73	1.19		2.75	
	97	18.92		20.42	
	99	17.72		17.72	
		Total:	505.14	Total:	883.41
121	20	1.14		1.47	
	24	52.94		102.52	
	28	81.24		127.63	
	29	0.67		1.00	
	32	0.31		0.38	
	33	1.82		2.14	
	34	33.63		38.55	
	35	49.30		120.69	
	36	446.70		665.58	
	37	318.16		312.15	
	38	227.16		624.15	
	40	14.44		25.40	
	42	30.54		52.36	
	45	201.41		355.25	
	48	0.42		0.65	
	49	46.93		61.89	
	50	0.60		0.96	
	51	9.19		14.73	
	73	1093.82		2491.41	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	94	0.06		0.07	
	97	252.47		285.74	
	99	154.94		154.94	
		Total:	3017.89	Total:	5439.66
122	20	0.57		0.65	
	27	0.22		0.44	
	28	1849.67		2940.88	
	29	341.90		733.19	
	32	0.22		0.27	
	33	54.78		77.47	
	34	7.94		10.89	
	35	417.60		917.80	
	36	183.37		424.12	
	37	9.35		11.43	
	38	0.78		2.33	
	40	20.24		44.67	
	41	191.13		336.21	
	42	2.47		3.54	
	45	3.21		5.65	
	49	9.97		18.60	
	51	1.83		3.30	
	73	24.13		56.14	
	76	1007.90		1385.14	
	79	0.00		0.00	
	80	2.91		4.24	
	82	1.53		2.21	
	89	2.66		6.30	
	94	3.13		3.39	
	95	2.25		2.56	
	97	414.64		451.98	
	99	21.78		21.78	
		Total:	4576.18	Total:	7465.18
123	20	2.29		2.62	
	28	1477.82		2239.46	
	29	41.85		57.16	
	32	0.05		0.06	
	34	213.62		269.64	
	35	153.21		336.76	
	36	1582.22		2602.63	
	37	100.42		98.36	
	38	64.86		182.73	
	42	0.89		1.28	
	48	0.12		0.25	
	49	62.36		79.81	
	51	19.61		33.92	
	61	0.22		0.37	
	73	0.22		0.52	
	75	0.02		0.02	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	82	0.20		0.30	
	94	0.02		0.02	
	96	358.55		392.82	
	97	153.19		170.55	
	99	266.14		266.14	
		Total:	4497.88	Total:	6735.42
131	10	0.22		0.09	
	20	0.22		0.25	
	27	0.39		0.71	
	28	1050.86		1652.85	
	29	9.50		12.98	
	33	143.42		168.32	
	34	561.87		728.96	
	35	35.60		85.78	
	36	906.89		2399.46	
	37	319.38		312.81	
	38	2.08		5.85	
	42	50.07		80.54	
	44	825.45		1273.61	
	49	41.22		49.62	
	51	0.45		0.72	
	73	1.92		4.10	
	80	0.02		0.03	
	94	0.56		0.64	
	95	0.20		0.23	
	97	0.66		0.74	
	99	38.61		38.61	
		Total:	3989.59	Total:	6816.90
132	20	6.25		6.42	
	27	0.56		1.01	
	28	1548.92		2357.61	
	29	7920.44		11716.49	
	30	8.34		9.55	
	33	8.29		10.74	
	34	228.85		279.80	
	35	186.57		443.75	
	36	2745.95		4518.67	
	37	107.79		107.52	
	38	193.23		527.14	
	44	6.46		9.97	
	45	0.22		0.39	
	49	3189.30		3963.61	
	50	0.01		0.02	
	55	607.42		966.93	
	73	63.94		158.48	
	75	1.04		1.19	
	80	1.14		1.66	
	91	0.22		0.24	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	94	0.04		0.04	
	97	144.49		158.12	
	99	662.58		662.58	
		Total:	17632.05	Total:	25901.93
133	17	6.25		10.47	
	24	13.06		17.62	
	28	1613.60		1811.06	
	29	775.94		1062.57	
	34	14.17		15.61	
	36	10.92		30.36	
	37	225.69		229.98	
	38	5.38		15.47	
	44	31.69		48.90	
	49	16.86		20.34	
	51	7.33		11.75	
	55	1.66		2.94	
	73	14.53		30.22	
	94	0.75		0.86	
	96	20.85		22.50	
	97	0.75		0.85	
	99	0.35		0.35	
		Total:	2759.78	Total:	3331.85
134	15	17.92		24.84	
	17	3.64		6.45	
	20	14.59		16.71	
	22	0.45		0.60	
	27	34.59		69.26	
	28	221.08		343.87	
	29	362.06		495.05	
	34	28.58		43.33	
	35	7482.94		16443.90	
	36	246.51		371.82	
	37	980.77		1190.81	
	38	7.20		19.64	
	41	40.23		70.77	
	42	75.46		143.43	
	44	306.26		472.54	
	48	3.12		6.13	
	49	23.79		42.43	
	50	0.68		1.00	
	55	49.69		74.79	
	57	0.05		0.07	
	73	93.77		217.54	
	75	44.27		52.82	
	76	31.27		42.97	
	82	7.50		11.77	
	94	4.17		4.66	
	95	3.33		3.79	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	97	311.79		340.30	
	99	4.16		4.16	
		Total:	10399.87	Total:	20515.45
135	17	61.36		102.76	
	20	124.15		87.06	
	22	1.35		1.79	
	26	34.40		37.30	
	27	3.66		5.87	
	28	1338.36		2148.67	
	29	123.51		190.30	
	32	8.34		10.21	
	33	22.93		17.17	
	35	40.49		88.98	
	36	810.85		964.96	
	37	18.40		18.02	
	38	4.91		13.87	
	42	0.90		1.29	
	48	16.68		32.76	
	49	8006.44		11995.35	
	50	0.40		0.72	
	65	5.14		9.87	
	73	9.85		21.27	
	75	0.83		0.95	
	82	0.02		0.03	
	87	20.85		0.00	
	92	0.20		0.22	
	96	19.97		21.88	
	97	6.04		6.59	
	99	4.64		4.64	
		Total:	10684.67	Total:	15782.53
141	20	0.57		0.65	
	28	101.44		152.27	
	29	713.47		1569.94	
	30	1.17		1.52	
	34	2.88		3.83	
	35	2.54		5.58	
	36	12.89		18.59	
	37	9.89		11.22	
	38	0.08		0.25	
	42	1.67		2.40	
	49	1.48		2.34	
	55	1170.25		1862.87	
	73	0.39		0.81	
	80	0.23		0.28	
	82	0.05		0.07	
	92	0.05		0.06	
	95	0.30		0.32	
	96	0.20		0.22	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
---------	----------	--------------------------	------------------	--------------------------	------------------

	97	114.68		123.76	
	99	0.14		0.14	
		Total:	2134.37	Total:	3757.12
151	15	41.47		0.00	
	17	169.38		0.00	
	20	201.12		0.00	
	26	17.87		0.00	
	27	0.42		0.00	
	28	918.17		0.00	
	29	1238.53		0.00	
	32	620.62		0.00	
	33	23.10		0.00	
	34	5.05		0.00	
	35	33.27		0.00	
	36	113.59		0.00	
	37	94.84		0.00	
	38	0.10		0.00	
	40	3.58		0.00	
	41	5.35		0.00	
	42	320.62		0.00	
	43	6.74		0.00	
	44	19.36		0.00	
	45	9.00		0.00	
	48	287.96		0.00	
	49	2091.09		0.00	
	50	25.28		0.00	
	55	76.71		0.00	
	57	12.62		0.00	
	65	145.49		0.00	
	70	493.81		0.00	
	72	0.05		0.00	
	73	431.53		0.00	
	76	0.28		0.00	
	79	1.27		0.00	
	80	209.10		0.00	
	82	1018.25		0.00	
	84	1.80		0.00	
	89	12.67		0.00	
	91	75.83		0.00	
	92	5.04		0.00	
	94	69.05		0.00	
	95	488.67		0.00	
	96	263.91		0.00	
	97	482.18		0.00	
	99	109.61		0.00	
		Total:	10144.38	Total:	0.00
161	29	4043.93		7729.59	
	44	0.20		0.31	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	73	15.17		33.15	
		Total:	4059.30	Total:	7763.05
162	28	108.50		177.29	
	29	5349.83		7567.20	
	49	12.64		15.25	
	97	0.17		0.19	
		Total:	5471.14	Total:	7759.93
171	27	68.97		125.00	
	28	80.71		121.49	
	31	353.85		384.43	
	33	36.68		46.90	
	34	341.94		476.54	
	35	2221.20		4883.97	
	36	982.43		2050.67	
	37	1574.51		1679.35	
	38	43.81		123.43	
	39	1.40		3.94	
	49	8.48		11.10	
	51	0.84		1.35	
	72	669.06		763.99	
	73	0.12		0.25	
	76	0.22		0.25	
	97	0.57		0.62	
	99	142.93		142.93	
		Total:	6527.72	Total:	10816.21
172	28	0.75		1.13	
	32	0.07		0.09	
	33	0.40		0.47	
	34	2.00		2.66	
	35	1.63		3.58	
	36	20.57		33.51	
	37	34.64		36.99	
	44	0.45		0.69	
	45	387.55		683.57	
	49	2.58		3.09	
	55	160.06		254.79	
	73	0.02		0.05	
	76	36.45		47.47	
	97	0.51		0.55	
	99	12.64		12.64	
		Total:	660.32	Total:	1081.28
181	10	11.86		4.68	
	17	201.34		242.43	
	20	0.45		0.52	
	22	0.84		1.12	
	26	8.21		4.40	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
---------	----------	--------------------------	------------------	--------------------------	------------------

28		641.82		1006.23	
29		5419.35		8506.73	
32		21.33		26.28	
33		1718.94		1520.36	
34		348.26		369.28	
35		390.91		861.31	
36		888.13		1541.00	
37		802.70		948.04	
38		48.67		135.88	
39		1.80		5.07	
40		0.35		0.54	
42		9.17		19.24	
45		17.47		30.81	
48		7.57		14.82	
49		19656.08		39480.60	
50		317.46		572.48	
51		0.84		1.35	
55		32.07		48.69	
57		0.40		0.55	
60		552.80		784.77	
72		89.80		102.54	
73		87.47		197.22	
75		4.88		6.56	
76		0.02		0.03	
79		101.22		146.04	
80		0.02		0.03	
82		6.28		9.29	
91		7.10		8.06	
94		0.05		0.06	
95		0.30		0.34	
96		16.01		17.54	
97		222.47		249.39	
99		214.09		214.09	

Total: 31848.53

Total: 57078.37

211	15	2.05		3.43	
	16	1.41		1.70	
	17	0.69		0.83	
	20	1.45		1.58	
	25	1.35		2.61	
	26	19.66		17.14	
	27	28.62		50.48	
	28	458.52		729.75	
	29	9.03		13.43	
	30	0.65		0.77	
	32	3.63		4.51	
	33	7.95		9.32	
	34	36.09		50.01	
	35	1204.09		2652.12	
	36	369.85		537.45	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
37		88.36		87.45	
38		114.18		354.94	
39		2.46		6.95	
42		256.92		367.90	
45		150.69		265.78	
48		4.13		6.14	
49		638.53		793.94	
50		122.50		196.97	
51		231.39		416.95	
55		1.11		1.52	
56		0.66		0.95	
59		2.29		3.62	
72		31.62		33.81	
73		396.32		894.74	
75		2.60		3.43	
76		16.64		22.53	
78		0.41		0.56	
80		6.35		8.33	
82		2.06		3.05	
91		1.81		2.04	
95		1.54		1.74	
96		0.40		0.46	
97		38.31		41.95	
99		194.90		194.90	
		Total:	4451.22	Total:	7785.78
212	15	0.22		0.37	
	17	5.48		7.70	
	20	45.01		46.03	
	25	2.93		4.99	
	27	70.58		109.07	
	28	310.49		482.56	
	29	4.57		8.91	
	30	0.68		0.78	
	31	6.67		7.25	
	32	5.27		6.58	
	33	14.33		16.82	
	34	55.81		75.84	
	35	1628.18		3578.39	
	36	446.37		666.42	
	37	432.71		528.99	
	38	30.30		91.56	
	39	0.22		0.62	
	41	4.70		8.29	
	42	2.25		3.23	
	43	0.66		0.73	
	44	1.35		2.08	
	45	37.35		66.77	
	48	0.97		1.71	
	49	14.22		17.43	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
---------	----------	--------------------------	------------------	--------------------------	------------------

50		30.22		48.93	
51		59.93		104.85	
53		3.66		4.93	
54		0.45		0.72	
55		6.12		8.54	
59		0.22		0.35	
73		87.04		202.07	
75		28.93		35.67	
76		1.58		2.08	
80		3.08		4.39	
82		6.45		9.76	
91		16.91		19.24	
92		0.45		0.50	
95		0.80		0.91	
97		5.12		5.53	
99		25.45		25.45	
		Total:	3397.73	Total:	6207.04

213	25	2.29		3.84	
	26	5.06		7.47	
	27	4.34		8.02	
	28	112.62		178.04	
	29	6.78		12.26	
	30	2.29		2.97	
	32	4.79		5.86	
	34	1.57		1.93	
	35	181.74		401.63	
	36	98.89		145.29	
	37	59.17		58.43	
	38	3.07		8.25	
	39	2.31		10.19	
	40	0.60		0.93	
	41	3.33		5.86	
	42	3.63		5.34	
	43	1.13		1.24	
	48	7.50		15.82	
	49	1630.98		2421.40	
	51	2.46		3.94	
	55	104.49		143.09	
	59	5.02		7.93	
	73	4766.81		10498.85	
	75	5.59		7.59	
	76	368.10		498.25	
	78	20.85		34.36	
	79	0.84		1.28	
	80	0.55		0.74	
	82	16.02		22.61	
	87	2.60		0.00	
	89	0.22		0.51	
	91	4.43		4.79	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	94	0.60		0.68	
	95	30.77		35.00	
	97	33.10		35.76	
	99	83.81		83.81	
		Total:	7578.35	Total:	14673.96
214	8	0.90		0.76	
	10	0.91		0.36	
	15	5.41		7.15	
	16	2.52		4.51	
	17	14.22		20.92	
	20	191.64		198.74	
	22	0.45		0.60	
	24	15.64		21.55	
	25	46.00		55.10	
	26	113.78		188.84	
	27	190.07		312.62	
	28	12371.09		19625.46	
	29	182.06		251.12	
	30	121.67		156.73	
	32	18.76		23.84	
	33	28.30		32.26	
	34	970.69		1159.66	
	35	1936.35		4251.24	
	36	1515.68		2383.22	
	37	392.73		479.44	
	38	175.53		490.24	
	39	8.82		26.64	
	41	15.72		26.79	
	42	59.32		85.13	
	43	7.36		8.07	
	44	1.77		2.92	
	45	37.22		65.74	
	48	2.26		3.39	
	49	1641.24		1986.86	
	50	10.58		17.11	
	51	48.52		80.71	
	52	1.95		2.78	
	53	36.73		49.64	
	55	157.91		239.62	
	57	1.43		1.96	
	59	20.79		32.85	
	60	27.97		53.72	
	63	0.91		1.76	
	67	0.80		1.27	
	70	0.22		0.35	
	72	0.63		0.85	
	73	471.21		1033.98	
	75	418.52		528.42	
	76	42.07		55.67	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	78	3.89		6.41	
	79	2.52		3.84	
	80	3.59		4.91	
	82	16.46		24.02	
	83	1.77		2.54	
	86	0.90		1.34	
	89	2.41		5.70	
	91	29.61		33.65	
	94	0.10		0.11	
	95	21.50		24.42	
	96	17.26		18.91	
	97	188.12		209.30	
	99	114.36		114.36	
		Total:	21710.84	Total:	34420.10
221	15	2.08		2.50	
	17	33.59		44.73	
	20	93.44		108.40	
	24	1.66		2.24	
	26	7.23		10.62	
	27	22.57		43.22	
	28	1070.10		1548.45	
	29	63130.91		72071.69	
	30	86.32		111.71	
	32	92.07		112.71	
	33	894.40		1240.37	
	34	129.77		266.01	
	35	356.12		784.94	
	36	151.24		235.57	
	37	2023.25		2018.84	
	38	35.57		100.02	
	40	235.93		409.55	
	41	10.32		18.15	
	42	43.92		73.92	
	43	0.06		0.07	
	44	149.77		231.08	
	45	1662.13		2931.70	
	48	30.43		56.86	
	49	8174.54		14366.33	
	50	3.63		6.18	
	51	2.09		3.35	
	53	1.14		1.54	
	55	37.09		52.78	
	57	0.25		0.34	
	67	1.35		2.15	
	73	558.70		1250.37	
	75	6.71		8.56	
	76	8.79		11.80	
	80	5.27		8.02	
	82	153.45		224.45	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
---------	----------	--------------------------	------------------	--------------------------	------------------

87	40.10	0.00
89	26.26	48.91
91	74.06	82.46
92	3.68	4.05
94	22.15	25.72
95	7.80	8.77
96	9.62	10.38
97	832.38	916.05
99	460.68	460.68

Total: 80692.62

Total: 99916.24

222	15	5.92	8.21
	20	51.28	66.10
	26	150.87	80.90
	27	15.23	26.57
	28	807.31	1273.34
	29	10321.08	20164.51
	32	29.06	35.58
	34	390.36	561.42
	35	13.93	30.61
	36	80.49	102.93
	37	9.85	9.73
	38	6.13	17.27
	41	338.79	588.47
	42	23.09	34.22
	43	2.08	2.28
	44	283.53	451.47
	45	10.42	18.38
	46	17.51	38.79
	48	18.33	37.26
	49	490.12	757.96
	51	8.12	13.01
	52	14.59	20.99
	54	5.83	9.28
	55	92.07	152.34
	72	22.76	25.99
	73	44.74	93.91
	75	130.89	184.13
	76	143.82	187.29
	82	17.92	26.44
	87	4.58	0.00
	89	34.80	56.69
	91	38.28	43.42
	94	1.56	1.68
	96	38.46	41.52
	97	139.49	156.16
	99	16.54	16.54

Total: 13819.83

Total: 25335.39

223	20	162.67	168.21
-----	----	--------	--------

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
27		5.00		9.06	
28		161.79		261.27	
29		3037.81		5057.60	
30		0.41		0.53	
31		5.21		5.66	
32		7.12		8.11	
33		16.33		23.09	
34		105.36		196.52	
35		28.32		70.07	
36		20.06		30.28	
37		34.03		33.33	
38		38.55		106.74	
40		25.26		44.43	
41		1.66		2.92	
42		5.84		8.71	
44		217.64		335.80	
45		48.04		84.70	
49		1045.16		1795.80	
50		3.64		6.57	
54		2.52		4.01	
55		7.41		10.58	
59		3.22		5.09	
73		11.84		25.38	
75		1.52		2.03	
76		5.00		6.51	
79		2.40		3.25	
80		0.18		0.22	
87		72.38		0.00	
91		16.65		19.06	
95		5.83		6.63	
96		32.75		35.35	
97		309.41		336.63	
99		42.31		42.31	
		Total:	5483.32	Total:	8746.45
231	28	23.72		38.12	
	35	0.08		0.18	
		Total:	23.80	Total:	38.30
232	20	8.41		5.99	
	28	3118.05		4987.83	
	30	0.15		0.19	
	49	10.38		12.52	
	51	2.98		5.38	
	52	1.92		2.76	
	73	0.23		0.67	
	79	0.10		0.14	
	82	0.60		0.91	
	91	0.63		0.71	
	92	0.07		0.08	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	95	1.14		1.27	
	97	0.20		0.22	
		Total:	3144.86	Total:	5018.67
241	17	5.46		7.57	
	27	6.67		12.09	
	28	288.08		460.06	
	29	4998.20		6605.89	
	30	0.11		0.14	
	32	58.16		61.09	
	33	19.59		22.99	
	34	253.26		504.20	
	35	120.63		258.09	
	36	65.35		114.83	
	37	31.03		32.17	
	38	84.75		237.25	
	40	43.34		96.00	
	41	61.36		108.19	
	42	245.94		363.20	
	44	271.52		419.64	
	45	5.89		10.39	
	46	80.93		195.70	
	48	37.63		79.35	
	49	96.38		182.08	
	50	20.88		37.67	
	51	13.13		23.68	
	55	20.51		28.25	
	72	11.63		15.98	
	73	14.06		25.94	
	75	109.63		129.73	
	80	1.25		1.53	
	82	44.79		63.21	
	87	300.84		0.00	
	91	25.12		28.27	
	95	1.45		1.65	
	96	22.91		24.72	
	97	535.22		786.70	
	99	43.59		43.59	
		Total:	7939.29	Total:	10981.84
251	28	2430.94		3910.31	
	34	0.68		0.75	
	36	1.25		1.89	
	51	40.18		72.48	
	91	10.42		11.87	
		Total:	2483.47	Total:	3997.30
252	28	53.71		86.40	
	29	6.33		16.84	
	36	88.87		246.49	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	18.76		22.63	
	73	1.18		2.58	
	89	0.61		1.44	
	92	1.10		1.25	
		Total:	170.56	Total:	377.63
261	15	2.48		4.15	
	26	0.11		0.06	
	27	0.03		0.05	
	28	147.80		235.51	
	29	15.27		20.86	
	32	244.95		299.21	
	33	5.89		6.91	
	34	17.18		18.92	
	35	8.22		18.06	
	36	67.85		74.18	
	37	105.63		114.65	
	38	0.48		1.35	
	40	0.20		0.35	
	41	7.00		12.35	
	44	0.02		0.04	
	49	4333.03		5456.14	
	50	1847.71		2960.83	
	55	35.19		56.02	
	65	37.07		60.65	
	73	248.74		576.72	
	75	3.40		4.62	
	76	199.52		270.12	
	79	1.60		2.17	
	80	49.47		79.80	
	82	73.02		103.06	
	91	0.02		0.02	
	92	0.15		0.17	
	95	1.29		1.47	
	96	9.86		10.78	
	97	554.43		612.95	
	99	8.33		8.33	
		Total:	8025.94	Total:	11010.50
271	28	1.75		2.76	
	34	62.99		172.05	
	36	45.89		46.15	
	37	53.62		58.24	
	73	4.12		9.68	
	97	0.15		0.17	
	99	0.68		0.68	
		Total:	169.20	Total:	289.73
272	20	121.69		125.04	
	27	12.80		20.06	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	28	57.77		86.38	
	32	1.98		2.96	
	34	53.36		58.92	
	35	12.38		27.21	
	36	7.79		9.45	
	37	0.67		0.66	
	38	5.47		13.71	
	44	0.22		0.34	
	45	0.67		1.18	
	48	1.22		1.72	
	49	36.75		44.80	
	73	17.38		40.80	
	75	7.08		8.04	
	95	6.50		7.39	
	97	1.39		1.50	
	99	49.70		49.70	
		Total:	394.82	Total:	499.86
281	20	51.80		53.23	
	27	17.50		27.43	
	28	111.52		178.87	
	35	1.54		3.43	
	36	11.77		12.37	
	37	2.84		4.39	
	49	0.79		0.95	
	89	3.88		9.19	
	94	0.00		0.00	
	96	0.25		0.27	
	97	2.23		2.42	
	99	2.47		2.47	
		Total:	206.59	Total:	295.02
291	17	1.20		1.56	
	28	300.89		465.14	
	29	0.22		0.30	
	34	1.83		2.02	
	36	0.22		0.33	
	37	0.90		0.88	
	42	0.22		0.32	
	49	59.29		71.56	
	80	0.04		0.05	
	82	1.35		2.01	
	94	0.27		0.30	
	97	100.44		109.14	
	99	33.21		33.21	
		Total:	500.08	Total:	686.82
311	28	56.08		84.95	
	32	0.00		0.00	
	38	3.62		10.20	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	0.22		0.27	
	73	7.70		15.96	
	80	3.19		4.26	
	94	0.84		0.96	
	Total:		71.65	Total:	116.60
321	29	610.05		833.24	
	34	1.35		1.49	
	91	16.00		18.23	
	92	0.45		0.49	
	Total:		627.85	Total:	853.45
322	20	6.74		7.72	
	28	0.07		0.11	
	37	0.91		0.89	
	38	1.67		4.70	
	73	0.30		0.70	
	80	14.49		18.23	
	82	0.20		0.30	
	91	0.05		0.06	
	95	16.82		19.13	
	Total:		41.25	Total:	51.84
331	17	2.98		3.86	
	27	0.37		0.75	
	28	37.34		59.20	
	29	86.56		118.79	
	30	4.66		6.68	
	31	1.36		1.48	
	32	0.31		0.39	
	34	16.45		18.21	
	35	5.29		11.62	
	36	3.57		5.21	
	37	88.47		87.73	
	38	17.21		46.99	
	42	1.40		2.01	
	44	0.22		0.34	
	45	1.30		2.29	
	49	59.33		104.47	
	63	0.18		0.30	
	73	2.47		5.57	
	75	1.36		1.87	
	79	10.04		13.63	
	80	0.72		0.88	
	82	0.05		0.07	
	89	1.11		2.63	
	91	0.90		0.97	
	92	0.22		0.25	
	94	0.00		0.00	
	95	0.50		0.55	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	97	21.56		23.45	
	99	3.33		3.33	
		Total:	369.26	Total:	523.52
341	28	2.93		4.68	
	32	1.14		1.40	
	35	96.97		213.48	
	36	30.91		46.65	
	37	4.86		6.00	
	38	1.55		4.33	
	42	1.36		1.95	
	73	3.17		6.70	
	82	0.04		0.06	
	94	0.27		0.31	
	95	0.66		0.71	
	97	2.00		2.16	
		Total:	145.86	Total:	288.43
342	20	10.40		11.91	
	28	53.10		83.77	
	29	75.04		102.49	
	30	0.22		0.29	
	34	16.40		18.05	
	35	3.35		7.36	
	36	13.56		20.47	
	37	11.24		12.88	
	55	8.26		12.60	
	94	0.02		0.02	
	97	0.41		0.44	
		Total:	192.00	Total:	270.28
343	27	18.25		35.84	
	28	1009.12		1607.28	
	29	102.49		147.62	
	30	11.66		15.11	
	31	0.22		0.24	
	33	1.25		1.77	
	34	1.33		1.77	
	35	210.99		463.65	
	36	273.66		293.04	
	37	148.59		172.81	
	38	8.16		22.71	
	39	0.12		0.37	
	40	0.35		0.54	
	41	16.68		29.42	
	43	0.22		0.25	
	45	2.06		3.62	
	48	25.92		46.67	
	49	203.35		410.28	
	50	17.51		28.06	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	51	55.29		84.09	
	55	0.20		0.27	
	73	76.21		171.91	
	75	15.87		20.67	
	79	10.50		14.24	
	80	0.45		0.55	
	82	1.21		1.79	
	87	55.33		0.00	
	95	0.35		0.39	
	96	2.46		2.65	
	97	48.54		52.39	
	99	7.60		7.60	
		Total:	2325.94	Total:	3637.60
351	28	1.34		2.13	
	32	0.68		0.83	
	35	0.10		0.22	
	36	28.94		43.68	
	37	2.87		2.81	
	38	1.60		5.00	
	40	0.45		0.69	
	49	284.24		343.18	
	67	0.30		0.48	
	73	0.85		1.76	
	78	0.01		0.02	
	99	7.66		7.66	
		Total:	329.04	Total:	408.46
352	17	29.01		46.96	
	20	0.60		0.42	
	24	15.17		29.38	
	25	0.22		0.37	
	26	7.79		4.18	
	27	67.74		122.57	
	28	2644.64		4031.63	
	29	1288.83		2755.53	
	30	1.20		1.56	
	31	96.12		104.43	
	32	0.40		0.50	
	34	740.20		818.51	
	35	1856.67		4080.19	
	36	275.28		400.78	
	37	395.18		486.94	
	38	15.96		45.74	
	40	1.49		2.30	
	41	0.40		0.71	
	42	3.37		5.47	
	43	0.22		0.25	
	44	0.67		1.03	
	45	1.65		3.99	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
46		25.27		57.68	
48		1.15		2.03	
49		1407.95		1791.55	
50		2.61		4.54	
52		0.50		0.72	
57		1.20		1.64	
59		37.07		58.57	
73		97.18		223.91	
75		0.75		0.86	
76		16.15		21.40	
78		0.57		0.94	
79		5.85		8.44	
80		0.20		0.27	
82		23.91		35.58	
86		0.01		0.01	
87		0.45		0.00	
92		0.75		0.84	
94		25.71		29.30	
95		1.78		2.02	
96		3.27		3.58	
97		165.49		179.40	
99		97.73		97.73	
		Total:	9358.36	Total:	15464.45
411	36	3.39		5.12	
	51	13.48		21.60	
		Total:	16.87	Total:	26.72
421	28	3.37		5.42	
	36	77.66		167.79	
	37	60.63		74.85	
	38	165.80		451.95	
	45	1519.31		2679.81	
	49	14.59		17.60	
	95	4.05		4.61	
	97	477.37		515.19	
		Total:	2322.78	Total:	3917.22
431	37	57.30		70.74	
	49	15.01		33.67	
	99	9.59		9.59	
		Total:	81.90	Total:	114.00
441	29	632.01		1671.88	
	36	1.83		2.76	
	49	20889.25		31034.81	
		Total:	21523.09	Total:	32709.45
451	29	0.20		0.20	
	34	12.74		14.03	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	35	4.79		11.72	
	36	14.19		35.01	
	37	10.11		26.24	
	38	4.11		11.70	
	48	0.66		1.06	
	49	0.00		0.00	
	50	1.32		2.12	
	51	5.86		9.39	
	55	7.08		9.70	
	75	7.07		9.49	
	76	0.41		0.56	
	78	0.08		0.16	
	91	4.17		4.75	
	99	0.94		0.94	
		Total:	73.73	Total:	137.07
461	15	2.50		3.01	
	17	46.54		59.97	
	20	22.69		23.31	
	23	1.14		1.51	
	24	11.22		14.96	
	25	9.90		10.74	
	26	2.04		1.09	
	28	2034.99		3193.91	
	30	10.11		14.13	
	31	2.36		2.56	
	32	0.63		0.77	
	34	406.43		562.05	
	35	32.98		73.20	
	36	52.50		114.55	
	37	1361.13		1473.92	
	38	53.52		148.22	
	39	0.67		2.03	
	42	1.36		1.95	
	44	20.32		32.51	
	45	288.05		508.07	
	48	29.07		68.42	
	49	13.78		17.64	
	51	0.25		0.40	
	53	20.62		27.80	
	73	4.81		9.97	
	75	23.20		26.54	
	76	0.63		0.79	
	78	2.52		4.15	
	80	3.21		4.79	
	82	5.93		8.34	
	95	18.91		21.51	
	96	14.97		16.16	
	97	152.25		164.35	
	99	85.33		85.33	
		Total:	4736.56	Total:	6698.65

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
471	28	3.00		4.52	
	99	37.98		37.98	
		Total:	40.98	Total:	42.50
481	28	1946.05		3130.45	
	46	10.42		23.08	
		Total:	1956.47	Total:	3153.53
491	27	22.18		40.45	
	28	228.89		361.88	
	29	1239.21		1692.60	
	30	2.28		2.95	
	31	718.59		827.71	
	32	4.94		6.17	
	34	257.86		285.11	
	35	572.53		1257.92	
	36	387.23		508.69	
	37	131.71		129.05	
	42	17.09		33.42	
	49	63.06		107.60	
	50	4.58		8.26	
	72	43.61		42.21	
	73	22.85		50.24	
	76	5.64		7.61	
	91	22.93		26.13	
	95	0.45		0.51	
	97	80.88		91.49	
	99	51.34		51.34	
		Total:	3877.85	Total:	5531.34
511	28	241.53		387.96	
	35	0.06		0.13	
	9	8.42		10.16	
	79	0.60		0.87	
	91	0.30		0.34	
		Total:	250.91	Total:	399.46
512	20	61.99		61.09	
	27	57.61		91.67	
	28	1123.71		1762.65	
	29	1121.45		1730.46	
	32	102.92		126.00	
	34	3.37		4.48	
	35	395.33		869.63	
	36	252.02		383.43	
	37	531.71		625.22	
	38	6.20		17.47	
	43	0.09		0.10	
	44	0.10		0.15	
	48	2.57		3.62	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	268.52		358.89	
	50	97.16		151.02	
	51	29.37		47.06	
	54	108.42		172.59	
	55	191.30		293.04	
	67	0.35		0.56	
	73	259.49		578.68	
	75	19.14		23.19	
	79	0.24		0.33	
	80	0.05		0.06	
	82	57.51		80.94	
	91	1.86		2.11	
	94	2.08		2.42	
	95	10.11		11.50	
	96	1.81		1.96	
	97	192.04		210.81	
	99	2.00		2.00	
		Total:	4900.52	Total:	7613.13
513	20	1.84		1.88	
	24	0.68		0.74	
	27	0.10		0.20	
	28	802.90		1284.32	
	29	0.17		0.23	
	34	188.75		251.09	
	35	40.97		90.37	
	36	416.70		633.42	
	37	90.24		90.88	
	38	0.88		2.48	
	41	0.12		0.21	
	42	0.68		0.98	
	44	25.28		39.01	
	49	859.57		1650.70	
	59	232.53		367.37	
	73	0.58		1.25	
	75	0.05		0.07	
	79	0.50		0.72	
	80	0.27		0.39	
	82	3.43		5.10	
	89	0.00		0.00	
	91	1.52		1.66	
	94	0.96		1.10	
	95	15.17		17.25	
	97	187.63		203.86	
	99	15.24		15.24	
		Total:	2886.76	Total:	4660.52
521	30	1.15		1.49	
	35	14.82		32.57	
	36	1037.17		1565.45	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	49	18.48		41.45	
	55	2.52		3.63	
	87	8.75		0.00	
	97	0.09		0.10	
	99	13.31		13.31	
		Total:	1096.29	Total:	1658.00
531	75	0.60		0.68	
		Total:	0.60	Total:	0.68
541	22	0.45		0.60	
	27	5.95		10.99	
	28	8.10		12.19	
	35	17.27		37.95	
	36	11.84		20.76	
	37	0.41		0.40	
	38	41.26		116.24	
	42	0.66		1.18	
	48	0.22		0.31	
	49	42.22		50.94	
	51	0.22		0.35	
	57	0.62		0.85	
	60	49.72		70.58	
	61	0.44		0.75	
	73	338.10		750.85	
	78	0.01		0.02	
	94	0.15		0.17	
	97	20.89		22.84	
	99	2.38		2.38	
		Total:	540.91	Total:	1100.35
551	10	0.03		0.01	
	17	5.88		9.85	
	20	1.88		1.52	
	22	0.45		0.60	
	26	0.07		0.08	
	27	0.02		0.03	
	28	798.26		1255.48	
	29	14.86		23.70	
	32	0.10		0.12	
	33	1.49		1.75	
	34	1.32		1.70	
	35	161.78		355.90	
	36	122.78		168.54	
	37	51.41		50.42	
	38	23.84		66.15	
	40	0.34		0.52	
	42	2.63		3.62	
	43	0.10		0.11	
	49	24.42		31.92	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	50	0.35		0.51	
	52	0.45		0.65	
	57	0.41		0.56	
	73	148.30		318.11	
	76	0.15		0.20	
	79	0.10		0.14	
	80	15.19		20.80	
	82	103.28		149.87	
	84	0.44		0.63	
	89	0.45		1.05	
	91	1.90		2.11	
	94	3.48		3.91	
	95	70.27		79.96	
	96	3.39		3.71	
	97	1.10		1.21	
	99	17.99		17.99	
		Total:	1578.91	Total:	2573.43
561	20	33.76		34.69	
	28	197.57		311.69	
	35	0.01		0.02	
	36	0.22		0.33	
	49	0.15		0.19	
	72	8.34		11.29	
	73	2.08		4.31	
	79	0.30		0.41	
	91	0.05		0.06	
	96	0.05		0.05	
	97	6.04		6.52	
	99	59.12		59.12	
		Total:	307.69	Total:	428.68
571	28	5.05		8.12	
	29	1319.44		1802.16	
	32	34.54		42.28	
	33	912.45		1166.74	
	36	0.00		0.00	
	37	37.91		37.13	
	49	505.82		665.97	
		Total:	2815.21	Total:	3722.40
581	28	4898.95		7875.14	
	35	10.10		22.19	
	36	3.00		4.53	
	49	515.85		1156.98	
	82	0.01		0.01	
	87	8.54		0.00	
	89	0.07		0.17	
		Total:	5436.52	Total:	9059.02

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
591	28	20.33		31.38	
	33	308.35		394.28	
	34	1460.32		1589.30	
	45	16.85		29.72	
	97	266.22		287.31	
		Total:	2072.07	Total:	2331.99
611	17	20.21		0.00	
	28	2311.00		0.00	
	29	6563.27		0.00	
	31	120.50		0.00	
	32	327.77		0.00	
	33	333.68		0.00	
	34	134.95		0.00	
	35	718.48		0.00	
	36	722.47		0.00	
	37	1235.27		0.00	
	38	40.47		0.00	
	40	27.01		0.00	
	41	854.99		0.00	
	42	29.79		0.00	
	44	10.84		0.00	
	45	337.07		0.00	
	49	2670.50		0.00	
	50	371.57		0.00	
	51	19.73		0.00	
	55	400.06		0.00	
	59	1.04		0.00	
	73	509.42		0.00	
	75	44.66		0.00	
	80	18.89		0.00	
	82	3.54		0.00	
	83	1.10		0.00	
	87	172.70		0.00	
	91	14.07		0.00	
	92	69.51		0.00	
	94	43.62		0.00	
	95	1.32		0.00	
	96	54.15		0.00	
	97	11113.85		0.00	
	99	675.68		0.00	
		Total:	29973.18	Total:	0.00
612	44	2.30		4.05	
	49	54.03		89.85	
	54	0.15		0.24	
	73	6.17		12.79	
	79	0.09		0.13	
	80	9.26		11.36	
	91	67.15		76.69	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	95	0.45		0.51	
	97	0.13		0.14	
		Total:	139.73	Total:	195.76
711	33	0.45		0.53	
	34	13.20		16.90	
	35	7.66		16.83	
	36	9.08		15.16	
	37	16.73		16.39	
	38	7.47		20.40	
	42	26.72		38.34	
	59	2.24		3.54	
	82	0.04		0.06	
	97	29.60		33.48	
	99	6.25		6.25	
		Total:	119.44	Total:	167.88
721	28	504.37		809.80	
	35	54.78		120.38	
	36	7.82		11.80	
		Total:	566.97	Total:	941.98
722	37	38.50		37.71	
		Total:	38.50	Total:	37.71
723	29	115.63		157.93	
	33	835.20		1181.15	
	35	0.02		0.04	
	37	104.61		102.46	
	73	1.14		2.36	
		Total:	1056.60	Total:	1443.94
724	28	0.22		0.33	
	36	0.67		0.67	
		Total:	0.89	Total:	1.00
725	28	0.42		0.68	
	29	0.22		0.59	
	36	0.08		0.22	
	37	0.10		0.11	
	38	0.04		0.11	
	49	0.60		1.32	
	55	0.04		0.06	
	80	0.24		0.29	
	82	0.41		0.57	
	97	0.19		0.21	
		Total:	2.34	Total:	4.16
726	34	46.25		83.76	
	35	0.44		0.97	

WASTE #	SIC-CODE	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	36	0.67		0.67	
		Total:	47.36	Total:	85.40
728	73	0.91		2.72	
		Total:	0.91	Total:	2.72
731	28	13.95		22.44	
	29	0.65		0.89	
	33	3.98		4.67	
	34	2.23		2.46	
	36	10.95		16.53	
	49	621.81		835.69	
	50	4.66		7.47	
	73	3.23		8.39	
	82	1.04		1.49	
	96	2.44		2.66	
	97	14.01		15.32	
	99	3.10		3.10	
		Total:	682.05	Total:	921.11
741	10	0.22		0.09	
	28	5.31		8.51	
	29	18.76		25.62	
	34	2.05		2.26	
	36	3.15		4.75	
	37	3.75		3.67	
	42	51.77		74.29	
	49	0.30		0.35	
	80	0.74		0.91	
		Total:	86.05	Total:	120.45
751	36	10.48		15.82	
	37	5.05		4.95	
	73	3.08		6.38	
		Total:	18.61	Total:	27.15
791	28	22.76		36.61	
	33	10.46		14.79	
	34	0.45		0.50	
	35	0.22		0.48	
	36	1.44		1.48	
	37	165.42		162.02	
	38	0.02		0.06	
	42	0.35		0.50	
	73	60.98		133.27	
	97	0.39		0.44	
		Total:	262.49	Total:	350.15
			-----		-----
		Total:	397930.57	Total:	546744.22

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
WASTE OIL	221	80692.62		99916.24	
	223	5483.32		8746.45	
		Total:	86175.94	Total:	108662.69
HALOGENATED SOLVENTS	211	4451.22		7785.78	
	741	86.05		120.45	
		Total:	4537.27	Total:	7906.23
NON-HALOGENATED SOLVENTS	212	3397.73		6207.04	
	213	7578.35		14673.96	
	214	21710.84		34420.10	
		Total:	32686.92	Total:	55301.10
ORGANIC LIQUIDS	133	2759.78		3331.85	
	134	10399.87		20515.45	
	341	145.86		288.43	
	342	192.00		270.28	
	343	2325.94		3637.60	
		Total:	15823.45	Total:	28043.61
PESTICIDES	231	23.80		38.30	
	232	3144.86		5018.67	
		Total:	3168.66	Total:	5056.97
DIOXINS	261	8025.94		11010.50	
	731	682.05		921.11	
		Total:	8707.99	Total:	11931.61
OILY SLUDGES	222	13819.83		25335.39	
	352	9358.36		15464.45	
	481	1956.47		3153.53	
		Total:	25134.66	Total:	43953.37
HALOGENATED ORGANIC SLUDGES & SOLIDS	251	2483.47		3997.30	
	351	329.04		408.46	
	451	73.73		137.07	
	751	18.61		27.15	
		Total:	2904.85	Total:	4569.98
NON-HALOGEN ORGANIC SLUDGES & SOLIDS	241	7939.29		10981.84	
	252	170.56		377.63	
	321	627.85		853.45	
	471	40.98		42.50	
	491	3877.85		5531.34	
	571	2815.21		3722.40	
		Total:	15471.74	Total:	21509.16
DYE & PAINT SLUDGES AND RESINS	271	169.20		289.73	
	272	394.82		499.86	
	281	206.59		295.02	

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	291	500.08		686.82	
	461	4736.56		6698.65	
		Total:	6007.25	Total:	8470.08
METAL-CONTAINING SLUDGES	171	6527.72		10816.21	
		Total:	6527.72	Total:	10816.21
METAL-CONTAINING LIQUIDS	111	12786.23		19186.71	
	121	3017.89		5439.66	
	132	17632.05		25901.93	
	721	566.97		941.98	
	722	38.50		37.71	
	723	1056.60		1443.94	
	724	0.89		1.00	
	725	2.34		4.16	
	726	47.36		85.40	
	728	0.91		2.72	
		Total:	35149.74	Total:	53045.21
CYANIDE & METAL LIQUIDS	711	119.44		167.88	
		Total:	119.44	Total:	167.88
NON-METALLIC INORGANIC LIQUIDS	112	3070.06		4356.41	
	113	505.14		883.41	
	122	4576.18		7465.18	
	123	4497.88		6735.42	
	131	3989.59		6816.90	
	135	10684.67		15782.53	
	791	262.49		350.15	
		Total:	27586.01	Total:	42390.00
NON-METALLIC INORGANIC SLUDGES	411	16.87		26.72	
	421	2322.78		3917.22	
	431	81.90		114.00	
	441	21523.09		32709.45	
	521	1096.29		1658.00	
		Total:	25040.93	Total:	38425.39
SOIL	611	29973.18		0.00	
		Total:	29973.18	Total:	0.00
MISCELLANEOUS WASTES	141	2134.37		3757.12	
	151	10144.38		0.00	
	161	4059.30		7763.05	
	162	5471.14		7759.93	
	172	660.32		1081.28	
	181	31848.53		57078.37	
	311	71.65		116.60	
	322	41.25		51.84	
	331	369.26		523.52	

COUNTY: REGION

SORT: By waste group

Page: 3

WASTE GROUP	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	511	250.91		399.46	
	512	4900.52		7613.13	
	513	2886.76		4660.52	
	531	0.60		0.68	
	541	540.91		1100.35	
	551	1578.91		2573.43	
	561	307.69		428.68	
	581	5436.52		9059.02	
	591	2072.07		2331.99	
	612	139.73		195.76	
		Total:	72914.82	Total:	106494.73

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
8	214	0.90		0.76	
		Total:	0.90	Total:	0.76
10	111	5.01		1.98	
	131	0.22		0.09	
	181	11.86		4.68	
	214	0.91		0.36	
	551	0.03		0.01	
	741	0.22		0.09	
		Total:	18.25	Total:	7.21
15	134	17.92		24.84	
	151	41.47		0.00	
	211	2.05		3.43	
	212	0.22		0.37	
	214	5.41		7.15	
	221	2.08		2.50	
	222	5.92		8.21	
	261	2.48		4.15	
	461	2.50		3.01	
		Total:	80.05	Total:	53.66
16	211	1.41		1.70	
	214	2.52		4.51	
		Total:	3.93	Total:	6.21
17	133	6.25		10.47	
	134	3.64		6.45	
	135	61.36		102.76	
	151	169.38		0.00	
	181	201.34		242.43	
	211	0.69		0.83	
	212	5.48		7.70	
	214	14.22		20.92	
	221	33.59		44.73	
	241	5.46		7.57	
	291	1.20		1.56	
	331	2.98		3.86	
	352	29.01		46.96	
	461	46.54		59.97	
	551	5.88		9.85	
	611	20.21		0.00	
		Total:	607.23	Total:	566.06
20	111	20.29		31.61	
	112	0.12		0.14	
	121	1.14		1.47	
	122	0.57		0.65	
	123	2.29		2.62	
	131	0.22		0.25	
	132	6.25		6.42	
	134	14.59		16.71	
	135	124.15		87.06	
	141	0.57		0.65	
	151	201.12		0.00	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	181	0.45		0.52	
	211	1.45		1.58	
	212	45.01		46.03	
	214	191.64		198.74	
	221	93.44		108.40	
	222	51.28		66.10	
	223	162.67		168.21	
	232	8.41		5.99	
	272	121.69		125.04	
	281	51.80		53.23	
	322	6.74		7.72	
	342	10.40		11.91	
	352	0.60		0.42	
	461	22.69		23.31	
	512	61.99		61.09	
	513	1.84		1.88	
	551	1.88		1.52	
	561	33.76		34.69	
		Total:	1239.05	Total:	1063.96
22	112	0.35		0.47	
	113	0.92		1.22	
	134	0.45		0.60	
	135	1.35		1.79	
	181	0.84		1.12	
	214	0.45		0.60	
	541	0.45		0.60	
	551	0.45		0.60	
		Total:	5.26	Total:	7.00
23	461	1.14		1.51	
		Total:	1.14	Total:	1.51
24	111	27.10		52.48	
	121	52.94		102.52	
	133	13.06		17.62	
	214	15.64		21.55	
	221	1.66		2.24	
	352	15.17		29.38	
	461	11.22		14.96	
	513	0.68		0.74	
		Total:	137.47	Total:	241.49
25	211	1.35		2.61	
	212	2.93		4.99	
	213	2.29		3.84	
	214	46.00		55.10	
	352	0.22		0.37	
	461	9.90		10.74	
		Total:	62.69	Total:	77.65
26	111	0.02		0.02	
	135	34.40		37.30	
	151	17.87		0.00	
	181	8.21		4.40	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	211	19.66		17.14	
	213	5.06		7.47	
	214	113.78		188.84	
	221	7.23		10.62	
	222	150.87		80.90	
	261	0.11		0.06	
	352	7.79		4.18	
	461	2.04		1.09	
	551	0.07		0.08	
		Total:	367.11	Total:	352.10
27	111	44.04		84.20	
	122	0.22		0.44	
	131	0.39		0.71	
	132	0.56		1.01	
	134	34.59		69.26	
	135	3.66		5.87	
	151	0.42		0.00	
	171	68.97		125.00	
	211	28.62		50.48	
	212	70.58		109.07	
	213	4.34		8.02	
	214	190.07		312.62	
	221	22.57		43.22	
	222	15.23		26.57	
	223	5.00		9.06	
	241	6.67		12.09	
	261	0.03		0.05	
	272	12.80		20.06	
	281	17.50		27.43	
	331	0.37		0.75	
	343	18.25		35.84	
	352	67.74		122.57	
	491	22.18		40.45	
	512	57.61		91.67	
	513	0.10		0.20	
	541	5.95		10.99	
	551	0.02		0.03	
		Total:	698.48	Total:	1207.66
28	111	800.22		1237.63	
	112	213.36		343.06	
	113	5.61		8.70	
	121	81.24		127.63	
	122	1849.67		2940.88	
	123	1477.82		2239.46	
	131	1050.86		1652.85	
	132	1548.92		2357.61	
	133	1613.60		1811.06	
	134	221.08		343.87	
	135	1338.36		2148.67	
	141	101.44		152.27	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	151	918.17		0.00	
	162	108.50		177.29	
	171	80.71		121.49	
	172	0.75		1.13	
	181	641.82		1006.23	
	211	458.52		729.75	
	212	310.49		482.56	
	213	112.62		178.04	
	214	12371.09		19625.46	
	221	1070.10		1548.45	
	222	807.31		1273.34	
	223	161.79		261.27	
	231	23.72		38.12	
	232	3118.05		4987.83	
	241	288.08		460.06	
	251	2430.94		3910.31	
	252	53.71		86.40	
	261	147.80		235.51	
	271	1.75		2.76	
	272	57.77		86.38	
	281	111.52		178.87	
	291	300.89		465.14	
	311	56.08		84.95	
	322	0.07		0.11	
	331	37.34		59.20	
	341	2.93		4.68	
	342	53.10		83.77	
	343	1009.12		1607.28	
	351	1.34		2.13	
	352	2644.64		4031.63	
	421	3.37		5.42	
	461	2034.99		3193.91	
	471	3.00		4.52	
	481	1946.05		3130.45	
	491	228.89		361.88	
	511	241.53		387.96	
	512	1123.71		1762.65	
	513	802.90		1284.32	
	541	8.10		12.19	
	551	798.26		1255.48	
	561	197.57		311.69	
	571	5.05		8.12	
	581	4898.95		7875.14	
	591	20.33		31.38	
	611	2311.00		0.00	
	721	504.37		809.80	
	724	0.22		0.33	
	725	0.42		0.68	
	731	13.95		22.44	
	741	5.31		8.51	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	791	22.76		36.61	
		Total:	52853.63	Total:	77597.31
29	112	16.90		23.08	
	113	7.58		10.35	
	121	0.67		1.00	
	122	341.90		733.19	
	123	41.85		57.16	
	131	9.50		12.98	
	132	7920.44		11716.49	
	133	775.94		1062.57	
	134	362.06		495.05	
	135	123.51		190.30	
	141	713.47		1569.94	
	151	1238.53		0.00	
	161	4043.93		7729.59	
	162	5349.83		7567.20	
	181	5419.35		8506.73	
	211	9.03		13.43	
	212	4.57		8.91	
	213	6.78		12.26	
	214	182.06		251.12	
	221	63130.91		72071.69	
	222	10321.08		20164.51	
	223	3037.81		5057.60	
	241	4998.20		6605.89	
	252	6.33		16.84	
	261	15.27		20.86	
	291	0.22		0.30	
	321	610.05		833.24	
	331	86.56		118.79	
	342	75.04		102.49	
	343	102.49		147.62	
	352	1288.83		2755.53	
	441	632.01		1671.88	
	451	0.20		0.20	
	491	1239.21		1692.60	
	512	1121.45		1730.46	
	513	0.17		0.23	
	551	14.86		23.70	
	571	1319.44		1802.16	
	611	6563.27		0.00	
	723	115.63		157.93	
	725	0.22		0.59	
	731	0.65		0.89	
	741	18.76		25.62	
		Total:	121266.56	Total:	154962.97
30	132	8.34		9.55	
	141	1.17		1.52	
	211	0.65		0.77	
	212	0.68		0.78	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	213	2.29		2.97	
	214	121.67		156.73	
	221	86.32		111.71	
	223	0.41		0.53	
	232	0.15		0.19	
	241	0.11		0.14	
	331	4.66		6.68	
	342	0.22		0.29	
	343	11.66		15.11	
	352	1.20		1.56	
	461	10.11		14.13	
	491	2.28		2.95	
	521	1.15		1.49	
		Total:	253.07	Total:	327.10
31	113	0.22		0.24	
	171	353.85		384.43	
	212	6.67		7.25	
	223	5.21		5.66	
	331	1.36		1.48	
	343	0.22		0.24	
	352	96.12		104.43	
	461	2.36		2.56	
	491	718.59		827.71	
	611	120.50		0.00	
		Total:	1305.10	Total:	1334.00
32	111	1.51		1.88	
	112	56.80		69.56	
	113	0.45		0.56	
	121	0.31		0.38	
	122	0.22		0.27	
	123	0.05		0.06	
	135	8.34		10.21	
	151	620.62		0.00	
	172	0.07		0.09	
	181	21.33		26.28	
	211	3.63		4.51	
	212	5.27		6.58	
	213	4.79		5.86	
	214	18.76		23.84	
	221	92.07		112.71	
	222	29.06		35.58	
	223	7.12		8.11	
	241	58.16		61.09	
	261	244.95		299.21	
	272	1.98		2.96	
	311	0.00		0.00	
	331	0.31		0.39	
	341	1.14		1.40	
	351	0.68		0.83	
	352	0.40		0.50	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	461	0.63		0.77	
	491	4.94		6.17	
	512	102.92		126.00	
	551	0.10		0.12	
	571	34.54		42.28	
	611	327.77		0.00	
		Total:	1648.92	Total:	848.20
33	111	736.95		1039.41	
	112	29.11		36.08	
	113	17.93		23.02	
	121	1.82		2.14	
	122	54.78		77.47	
	131	143.42		168.32	
	132	8.29		10.74	
	135	22.93		17.17	
	151	23.10		0.00	
	171	36.68		46.90	
	172	0.40		0.47	
	181	1718.94		1520.36	
	211	7.95		9.32	
	212	14.33		16.82	
	214	28.30		32.26	
	221	894.40		1240.37	
	223	16.33		23.09	
	241	19.59		22.99	
	261	5.89		6.91	
	343	1.25		1.77	
	551	1.49		1.75	
	571	912.45		1166.74	
	591	308.35		394.28	
	611	333.68		0.00	
	711	0.45		0.53	
	723	835.20		1181.15	
	731	3.98		4.67	
	791	10.46		14.79	
		Total:	6188.45	Total:	7059.52
34	111	4460.14		5024.42	
	112	251.48		278.28	
	121	33.63		38.55	
	122	7.94		10.89	
	123	213.62		269.64	
	131	561.87		728.96	
	132	228.85		279.80	
	133	14.17		15.61	
	134	28.58		43.33	
	141	2.88		3.83	
	151	5.05		0.00	
	171	341.94		476.54	
	172	2.00		2.66	
	181	348.26		369.28	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	211	36.09		50.01	
	212	55.81		75.84	
	213	1.57		1.93	
	214	970.69		1159.66	
	221	129.77		266.01	
	222	390.36		561.42	
	223	105.36		196.52	
	241	253.26		504.20	
	251	0.68		0.75	
	261	17.18		18.92	
	271	62.99		172.05	
	272	53.36		58.92	
	291	1.83		2.02	
	321	1.35		1.49	
	331	16.45		18.21	
	342	16.40		18.05	
	343	1.33		1.77	
	352	740.20		818.51	
	451	12.74		14.03	
	461	406.43		562.05	
	491	257.86		285.11	
	512	3.37		4.48	
	513	188.75		251.09	
	551	1.32		1.70	
	591	1460.32		1589.30	
	611	134.95		0.00	
	711	13.20		16.90	
	726	46.25		83.76	
	731	2.23		2.46	
	741	2.05		2.26	
	791	0.45		0.50	
		Total:	11885.01	Total:	14281.71
35	111	1594.67		3545.81	
	112	40.87		89.97	
	113	256.52		563.71	
	121	49.30		120.69	
	122	417.60		917.80	
	123	153.21		336.76	
	131	35.60		85.78	
	132	186.57		443.75	
	134	7482.94		16443.90	
	135	40.49		88.98	
	141	2.54		5.58	
	151	33.27		0.00	
	171	2221.20		4883.97	
	172	1.63		3.58	
	181	390.91		861.31	
	211	1204.09		2652.12	
	212	1628.18		3578.39	
	213	181.74		401.63	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	214	1936.35		4251.24	
	221	356.12		784.94	
	222	13.93		30.61	
	223	28.32		70.07	
	231	0.08		0.18	
	241	120.63		258.09	
	261	8.22		18.06	
	272	12.38		27.21	
	281	1.54		3.43	
	331	5.29		11.62	
	341	96.97		213.48	
	342	3.35		7.36	
	343	210.99		463.65	
	351	0.10		0.22	
	352	1856.67		4080.19	
	451	4.79		11.72	
	461	32.98		73.20	
	491	572.53		1257.92	
	511	0.06		0.13	
	512	395.33		869.63	
	513	40.97		90.37	
	521	14.82		32.57	
	541	17.27		37.95	
	551	161.78		355.90	
	561	0.01		0.02	
	581	10.10		22.19	
	611	718.48		0.00	
	711	7.66		16.83	
	721	54.78		120.38	
	723	0.02		0.04	
	726	0.44		0.97	
	791	0.22		0.48	
		Total:	22604.51	Total:	48134.38
36	111	2544.72		4707.49	
	112	1635.01		2477.97	
	113	145.42		196.20	
	121	446.70		665.58	
	122	183.37		424.12	
	123	1582.22		2602.63	
	131	906.89		2399.46	
	132	2745.95		4518.67	
	133	10.92		30.36	
	134	246.51		371.82	
	135	810.85		964.96	
	141	12.89		18.59	
	151	113.59		0.00	
	171	982.43		2050.67	
	172	20.57		33.51	
	181	888.13		1541.00	
	211	369.85		537.45	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	212	446.37		666.42	
	213	98.89		145.29	
	214	1515.68		2383.22	
	221	151.24		235.57	
	222	80.49		102.93	
	223	20.06		30.28	
	241	65.35		114.83	
	251	1.25		1.89	
	252	88.87		246.49	
	261	67.85		74.18	
	271	45.89		46.15	
	272	7.79		9.45	
	281	11.77		12.37	
	291	0.22		0.33	
	331	3.57		5.21	
	341	30.91		46.65	
	342	13.56		20.47	
	343	273.66		293.04	
	351	28.94		43.68	
	352	275.28		400.78	
	411	3.39		5.12	
	421	77.66		167.79	
	441	1.83		2.76	
	451	14.19		35.01	
	461	52.50		114.55	
	491	387.23		508.69	
	512	252.02		383.43	
	513	416.70		633.42	
	521	1037.17		1565.45	
	541	11.84		20.76	
	551	122.78		168.54	
	561	0.22		0.33	
	571	0.00		0.00	
	581	3.00		4.53	
	611	722.47		0.00	
	711	9.08		15.16	
	721	7.82		11.80	
	724	0.67		0.67	
	725	0.08		0.22	
	726	0.67		0.67	
	731	10.95		16.53	
	741	3.15		4.75	
	751	10.48		15.82	
	791	1.44		1.48	
		Total:	20021.00	Total:	32097.19
37	111	626.97		614.57	
	112	12.01		11.76	
	113	8.94		8.76	
	121	318.16		312.15	
	122	9.35		11.43	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	123	100.42		98.36	
	131	319.38		312.81	
	132	107.79		107.52	
	133	225.69		229.98	
	134	980.77		1190.81	
	135	18.40		18.02	
	141	9.89		11.22	
	151	94.84		0.00	
	171	1574.51		1679.35	
	172	34.64		36.99	
	181	802.70		948.04	
	211	88.36		87.45	
	212	432.71		528.99	
	213	59.17		58.43	
	214	392.73		479.44	
	221	2023.25		2018.84	
	222	9.85		9.73	
	223	34.03		33.33	
	241	31.03		32.17	
	261	105.63		114.65	
	271	53.62		58.24	
	272	0.67		0.66	
	281	2.84		4.39	
	291	0.90		0.88	
	322	0.91		0.89	
	331	88.47		87.73	
	341	4.86		6.00	
	342	11.24		12.88	
	343	148.59		172.81	
	351	2.87		2.81	
	352	395.18		486.94	
	421	60.63		74.85	
	431	57.30		70.74	
	451	10.11		26.24	
	461	1361.13		1473.92	
	491	131.71		129.05	
	512	531.71		625.22	
	513	90.24		90.88	
	541	0.41		0.40	
	551	51.41		50.42	
	571	37.91		37.13	
	611	1235.27		0.00	
	711	16.73		16.39	
	722	38.50		37.71	
	723	104.61		102.46	
	725	0.10		0.11	
	741	3.75		3.67	
	751	5.05		4.95	
	791	165.42		162.02	
		Total:	13033.36	Total:	12695.19

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
38	111	75.55		212.96	
	112	1.61		4.50	
	113	0.26		0.74	
	121	227.16		624.15	
	122	0.78		2.33	
	123	64.86		182.73	
	131	2.08		5.85	
	132	193.23		527.14	
	133	5.38		15.47	
	134	7.20		19.64	
	135	4.91		13.87	
	141	0.08		0.25	
	151	0.10		0.00	
	171	43.81		123.43	
	181	48.67		135.88	
	211	114.18		354.94	
	212	30.30		91.56	
	213	3.07		8.25	
	214	175.53		490.24	
	221	35.57		100.02	
	222	6.13		17.27	
	223	38.55		106.74	
	241	84.75		237.25	
	261	0.48		1.35	
	272	5.47		13.71	
	311	3.62		10.20	
	322	1.67		4.70	
	331	17.21		46.99	
	341	1.55		4.33	
	343	8.16		22.71	
	351	1.60		5.00	
	352	15.96		45.74	
	421	165.80		451.95	
	451	4.11		11.70	
	461	53.52		148.22	
	512	6.20		17.47	
	513	0.88		2.48	
	541	41.26		116.24	
	551	23.84		66.15	
	611	40.47		0.00	
	711	7.47		20.40	
	725	0.04		0.11	
	791	0.02		0.06	
	Total:		1563.09	Total:	4264.72
39	111	0.22		0.62	
	171	1.40		3.94	
	181	1.80		5.07	
	211	2.46		6.95	
	212	0.22		0.62	
	213	2.31		10.19	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	214	8.82		26.64	
	343	0.12		0.37	
	461	0.67		2.03	
	Total:		18.02	Total:	56.43
40	121	14.44		25.40	
	122	20.24		44.67	
	151	3.58		0.00	
	181	0.35		0.54	
	213	0.60		0.93	
	221	235.93		409.55	
	223	25.26		44.43	
	241	43.34		96.00	
	261	0.20		0.35	
	343	0.35		0.54	
	351	0.45		0.69	
	352	1.49		2.30	
	551	0.34		0.52	
	611	27.01		0.00	
	Total:		373.58	Total:	625.92
41	122	191.13		336.21	
	134	40.23		70.77	
	151	5.35		0.00	
	212	4.70		8.29	
	213	3.33		5.86	
	214	15.72		26.79	
	221	10.32		18.15	
	222	338.79		588.47	
	223	1.66		2.92	
	241	61.36		108.19	
	261	7.00		12.35	
	343	16.68		29.42	
	352	0.40		0.71	
	513	0.12		0.21	
	611	854.99		0.00	
	Total:		1551.78	Total:	1208.34
42	111	2.30		3.42	
	112	0.36		0.52	
	121	30.54		52.36	
	122	2.47		3.54	
	123	0.89		1.28	
	131	50.07		80.54	
	134	75.46		143.43	
	135	0.90		1.29	
	141	1.67		2.40	
	151	320.62		0.00	
	181	9.17		19.24	
	211	256.92		367.90	
	212	2.25		3.23	
	213	3.63		5.34	
	214	59.32		85.13	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	221	43.92		73.92	
	222	23.09		34.22	
	223	5.84		8.71	
	241	245.94		363.20	
	291	0.22		0.32	
	331	1.40		2.01	
	341	1.36		1.95	
	352	3.37		5.47	
	461	1.36		1.95	
	491	17.09		33.42	
	513	0.68		0.98	
	541	0.66		1.18	
	551	2.63		3.62	
	611	29.79		0.00	
	711	26.72		38.34	
	741	51.77		74.29	
	791	0.35		0.50	
		Total:	1272.76	Total:	1413.70
43	151	6.74		0.00	
	212	0.66		0.73	
	213	1.13		1.24	
	214	7.36		8.07	
	221	0.06		0.07	
	222	2.08		2.28	
	343	0.22		0.25	
	352	0.22		0.25	
	512	0.09		0.10	
	551	0.10		0.11	
		Total:	18.66	Total:	13.10
44	111	0.22		0.34	
	131	825.45		1273.61	
	132	6.46		9.97	
	133	31.69		48.90	
	134	306.26		472.54	
	151	19.36		0.00	
	161	0.20		0.31	
	172	0.45		0.69	
	212	1.35		2.08	
	214	1.77		2.92	
	221	149.77		231.08	
	222	283.53		451.47	
	223	217.64		335.80	
	241	271.52		419.64	
	261	0.02		0.04	
	272	0.22		0.34	
	331	0.22		0.34	
	352	0.67		1.03	
	461	20.32		32.51	
	512	0.10		0.15	
	513	25.28		39.01	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	611	10.84		0.00	
	612	2.30		4.05	
	Total:		2175.64	Total:	3326.82
45	111	4.98		8.77	
	113	0.05		0.09	
	121	201.41		355.25	
	122	3.21		5.65	
	132	0.22		0.39	
	151	9.00		0.00	
	172	387.55		683.57	
	181	17.47		30.81	
	211	150.69		265.78	
	212	37.35		66.77	
	214	37.22		65.74	
	221	1662.13		2931.70	
	222	10.42		18.38	
	223	48.04		84.70	
	241	5.89		10.39	
	272	0.67		1.18	
	331	1.30		2.29	
	343	2.06		3.62	
	352	1.65		3.99	
	421	1519.31		2679.81	
	461	288.05		508.07	
	591	16.85		29.72	
	611	337.07		0.00	
	Total:		4742.59	Total:	7756.67
46	222	17.51		38.79	
	241	80.93		195.70	
	352	25.27		57.68	
	481	10.42		23.08	
	Total:		134.13	Total:	315.25
48	111	93.82		152.49	
	121	0.42		0.65	
	123	0.12		0.25	
	134	3.12		6.13	
	135	16.68		32.76	
	151	287.96		0.00	
	181	7.57		14.82	
	211	4.13		6.14	
	212	0.97		1.71	
	213	7.50		15.82	
	214	2.26		3.39	
	221	30.43		56.86	
	222	18.33		37.26	
	241	37.63		79.35	
	272	1.22		1.72	
	343	25.92		46.67	
	352	1.15		2.03	
	451	0.66		1.06	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	461	29.07		68.42	
	512	2.57		3.62	
	541	0.22		0.31	
		Total:	571.75	Total:	531.46
49	111	780.10		962.16	
	112	600.43		730.30	
	113	22.72		27.85	
	121	46.93		61.89	
	122	9.97		18.60	
	123	62.36		79.81	
	131	41.22		49.62	
	132	3189.30		3963.61	
	133	16.86		20.34	
	134	23.79		42.43	
	135	8006.44		11995.35	
	141	1.48		2.34	
	151	2091.09		0.00	
	162	12.64		15.25	
	171	8.48		11.10	
	172	2.58		3.09	
	181	19656.08		39480.60	
	211	638.53		793.94	
	212	14.22		17.43	
	213	1630.98		2421.40	
	214	1641.24		1986.86	
	221	8174.54		14366.33	
	222	490.12		757.96	
	223	1045.16		1795.80	
	232	10.38		12.52	
	241	96.38		182.08	
	252	18.76		22.63	
	261	4333.03		5456.14	
	272	36.75		44.80	
	281	0.79		0.95	
	291	59.29		71.56	
	311	0.22		0.27	
	331	59.33		104.47	
	343	203.35		410.28	
	351	284.24		343.18	
	352	1407.95		1791.55	
	421	14.59		17.60	
	431	15.01		33.67	
	441	20889.25		31034.81	
	451	0.00		0.00	
	461	13.78		17.64	
	491	63.06		107.60	
	511	8.42		10.16	
	512	268.52		358.89	
	513	859.57		1650.70	
	521	18.48		41.45	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	541	42.22		50.94	
	551	24.42		31.92	
	561	0.15		0.19	
	571	505.82		665.97	
	581	515.85		1156.98	
	611	2670.50		0.00	
	612	54.03		89.85	
	725	0.60		1.32	
	731	621.81		835.69	
	741	0.30		0.35	
		Total:	81304.11	Total:	124150.22
50	112	0.08		0.14	
	113	0.47		0.71	
	121	0.60		0.96	
	132	0.01		0.02	
	134	0.68		1.00	
	135	0.40		0.72	
	151	25.28		0.00	
	181	317.46		572.48	
	211	122.50		196.97	
	212	30.22		48.93	
	214	10.58		17.11	
	221	3.63		6.18	
	223	3.64		6.57	
	241	20.88		37.67	
	261	1847.71		2960.83	
	343	17.51		28.06	
	352	2.61		4.54	
	451	1.32		2.12	
	491	4.58		8.26	
	512	97.16		151.02	
	551	0.35		0.51	
	611	371.57		0.00	
	731	4.66		7.47	
		Total:	2883.90	Total:	4052.27
51	111	0.90		1.44	
	121	9.19		14.73	
	122	1.83		3.30	
	123	19.61		33.92	
	131	0.45		0.72	
	133	7.33		11.75	
	171	0.84		1.35	
	181	0.84		1.35	
	211	231.39		416.95	
	212	59.93		104.85	
	213	2.46		3.94	
	214	48.52		80.71	
	221	2.09		3.35	
	222	8.12		13.01	
	232	2.98		5.38	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	241	13.13		23.68	
	251	40.18		72.48	
	343	55.29		84.09	
	411	13.48		21.60	
	451	5.86		9.39	
	461	0.25		0.40	
	512	29.37		47.06	
	541	0.22		0.35	
	611	19.73		0.00	
		Total:	573.99	Total:	955.80
52	214	1.95		2.78	
	222	14.59		20.99	
	232	1.92		2.76	
	352	0.50		0.72	
	551	0.45		0.65	
		Total:	19.41	Total:	27.90
53	212	3.66		4.93	
	214	36.73		49.64	
	221	1.14		1.54	
	461	20.62		27.80	
		Total:	62.15	Total:	83.91
54	212	0.45		0.72	
	222	5.83		9.28	
	223	2.52		4.01	
	512	108.42		172.59	
	612	0.15		0.24	
		Total:	117.37	Total:	186.84
55	132	607.42		966.93	
	133	1.66		2.94	
	134	49.69		74.79	
	141	1170.25		1862.87	
	151	76.71		0.00	
	172	160.06		254.79	
	181	32.07		48.69	
	211	1.11		1.52	
	212	6.12		8.54	
	213	104.49		143.09	
	214	157.91		239.62	
	221	37.09		52.78	
	222	92.07		152.34	
	223	7.41		10.58	
	241	20.51		28.25	
	261	35.19		56.02	
	342	8.26		12.60	
	343	0.20		0.27	
	451	7.08		9.70	
	512	191.30		293.04	
	521	2.52		3.63	
	611	400.06		0.00	
	725	0.04		0.06	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	3169.22	Total:	4223.05
56	211	0.66		0.95	
		Total:	0.66	Total:	0.95
57	134	0.05		0.07	
	151	12.62		0.00	
	181	0.40		0.55	
	214	1.43		1.96	
	221	0.25		0.34	
	352	1.20		1.64	
	541	0.62		0.85	
	551	0.41		0.56	
		Total:	16.98	Total:	5.97
59	111	15.25		24.09	
	211	2.29		3.62	
	212	0.22		0.35	
	213	5.02		7.93	
	214	20.79		32.85	
	223	3.22		5.09	
	352	37.07		58.57	
	513	232.53		367.37	
	611	1.04		0.00	
	711	2.24		3.54	
		Total:	319.67	Total:	503.41
60	111	40.45		57.42	
	181	552.80		784.77	
	214	27.97		53.72	
	541	49.72		70.58	
		Total:	670.94	Total:	966.49
61	113	0.22		0.37	
	123	0.22		0.37	
	541	0.44		0.75	
		Total:	0.88	Total:	1.49
63	214	0.91		1.76	
	331	0.18		0.30	
		Total:	1.09	Total:	2.06
65	135	5.14		9.87	
	151	145.49		0.00	
	261	37.07		60.65	
		Total:	187.70	Total:	70.52
67	214	0.80		1.27	
	221	1.35		2.15	
	351	0.30		0.48	
	512	0.35		0.56	
		Total:	2.80	Total:	4.46
70	151	493.81		0.00	
	214	0.22		0.35	
		Total:	494.03	Total:	0.35
72	151	0.05		0.00	
	171	669.06		763.99	
	181	89.80		102.54	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	211	31.62		33.81	
	214	0.63		0.85	
	222	22.76		25.99	
	241	11.63		15.98	
	491	43.61		42.21	
	561	8.34		11.29	
		Total:	877.50	Total:	996.66
73	111	374.11		852.41	
	112	12.48		27.01	
	113	1.19		2.75	
	121	1093.82		2491.41	
	122	24.13		56.14	
	123	0.22		0.52	
	131	1.92		4.10	
	132	63.94		158.48	
	133	14.53		30.22	
	134	93.77		217.54	
	135	9.85		21.27	
	141	0.39		0.81	
	151	431.53		0.00	
	161	15.17		33.15	
	171	0.12		0.25	
	172	0.02		0.05	
	181	87.47		197.22	
	211	396.32		894.74	
	212	87.04		202.07	
	213	4766.81		10498.85	
	214	471.21		1033.98	
	221	558.70		1250.37	
	222	44.74		93.91	
	223	11.84		25.38	
	232	0.23		0.67	
	241	14.06		25.94	
	252	1.18		2.58	
	261	248.74		576.72	
	271	4.12		9.68	
	272	17.38		40.80	
	311	7.70		15.96	
	322	0.30		0.70	
	331	2.47		5.57	
	341	3.17		6.70	
	343	76.21		171.91	
	351	0.85		1.76	
	352	97.18		223.91	
	461	4.81		9.97	
	491	22.85		50.24	
	512	259.49		578.68	
	513	0.58		1.25	
	541	338.10		750.85	
	551	148.30		318.11	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	561	2.08		4.31	
	611	509.42		0.00	
	612	6.17		12.79	
	723	1.14		2.36	
	728	0.91		2.72	
	731	3.23		8.39	
	751	3.08		6.38	
	791	60.98		133.27	
	Total:		10396.05	Total:	21054.85
75	111	7.50		10.15	
	123	0.02		0.02	
	132	1.04		1.19	
	134	44.27		52.82	
	135	0.83		0.95	
	181	4.88		6.56	
	211	2.60		3.43	
	212	28.93		35.67	
	213	5.59		7.59	
	214	418.52		528.42	
	221	6.71		8.56	
	222	130.89		184.13	
	223	1.52		2.03	
	241	109.63		129.73	
	261	3.40		4.62	
	272	7.08		8.04	
	331	1.36		1.87	
	343	15.87		20.67	
	352	0.75		0.86	
	451	7.07		9.49	
	461	23.20		26.54	
	512	19.14		23.19	
	513	0.05		0.07	
	531	0.60		0.68	
	611	44.66		0.00	
	Total:		886.11	Total:	1067.28
76	111	3.88		5.15	
	112	157.36		216.26	
	122	1007.90		1385.14	
	134	31.27		42.97	
	151	0.28		0.00	
	171	0.22		0.25	
	172	36.45		47.47	
	181	0.02		0.03	
	211	16.64		22.53	
	212	1.58		2.08	
	213	368.10		498.25	
	214	42.07		55.67	
	221	8.79		11.80	
	222	143.82		187.29	
	223	5.00		6.51	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	261	199.52		270.12	
	352	16.15		21.40	
	451	0.41		0.56	
	461	0.63		0.79	
	491	5.64		7.61	
	551	0.15		0.20	
	Total:		2045.88	Total:	2782.08
78	211	0.41		0.56	
	213	20.85		34.36	
	214	3.89		6.41	
	351	0.01		0.02	
	352	0.57		0.94	
	451	0.08		0.16	
	461	2.52		4.15	
	541	0.01		0.02	
	Total:		28.34	Total:	46.62
79	112	0.00		0.00	
	122	0.00		0.00	
	151	1.27		0.00	
	181	101.22		146.04	
	213	0.84		1.28	
	214	2.52		3.84	
	223	2.40		3.25	
	232	0.10		0.14	
	261	1.60		2.17	
	331	10.04		13.63	
	343	10.50		14.24	
	352	5.85		8.44	
	511	0.60		0.87	
	512	0.24		0.33	
	513	0.50		0.72	
	551	0.10		0.14	
	561	0.30		0.41	
	612	0.09		0.13	
	Total:		138.17	Total:	195.63
80	111	1.15		1.68	
	112	0.14		0.19	
	122	2.91		4.24	
	131	0.02		0.03	
	132	1.14		1.66	
	141	0.23		0.28	
	151	209.10		0.00	
	181	0.02		0.03	
	211	6.35		8.33	
	212	3.08		4.39	
	213	0.55		0.74	
	214	3.59		4.91	
	221	5.27		8.02	
	223	0.18		0.22	
	241	1.25		1.53	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	261	49.47		79.80	
	291	0.04		0.05	
	311	3.19		4.26	
	322	14.49		18.23	
	331	0.72		0.88	
	343	0.45		0.55	
	352	0.20		0.27	
	461	3.21		4.79	
	512	0.05		0.06	
	513	0.27		0.39	
	551	15.19		20.80	
	611	18.89		0.00	
	612	9.26		11.36	
	725	0.24		0.29	
	741	0.74		0.91	
		Total:	351.39	Total:	178.89
82	111	0.22		0.31	
	112	5.81		8.65	
	122	1.53		2.21	
	123	0.20		0.30	
	134	7.50		11.77	
	135	0.02		0.03	
	141	0.05		0.07	
	151	1018.25		0.00	
	181	6.28		9.29	
	211	2.06		3.05	
	212	6.45		9.76	
	213	16.02		22.61	
	214	16.46		24.02	
	221	153.45		224.45	
	222	17.92		26.44	
	232	0.60		0.91	
	241	44.79		63.21	
	261	73.02		103.06	
	291	1.35		2.01	
	322	0.20		0.30	
	331	0.05		0.07	
	341	0.04		0.06	
	343	1.21		1.79	
	352	23.91		35.58	
	461	5.93		8.34	
	512	57.51		80.94	
	513	3.43		5.10	
	551	103.28		149.87	
	581	0.01		0.01	
	611	3.54		0.00	
	711	0.04		0.06	
	725	0.41		0.57	
	731	1.04		1.49	
		Total:	1572.58	Total:	796.33

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
83	214	1.77		2.54	
	611	1.10		0.00	
	Total:		2.87	Total:	2.54
84	151	1.80		0.00	
	551	0.44		0.63	
	Total:		2.24	Total:	0.63
86	214	0.90		1.34	
	352	0.01		0.01	
	Total:		0.91	Total:	1.35
87	135	20.85		0.00	
	213	2.60		0.00	
	221	40.10		0.00	
	222	4.58		0.00	
	223	72.38		0.00	
	241	300.84		0.00	
	343	55.33		0.00	
	352	0.45		0.00	
	521	8.75		0.00	
	581	8.54		0.00	
	611	172.70		0.00	
	Total:		687.12	Total:	0.00
89	111	0.00		0.00	
	122	2.66		6.30	
	151	12.67		0.00	
	213	0.22		0.51	
	214	2.41		5.70	
	221	26.26		48.91	
	222	34.80		56.69	
	252	0.61		1.44	
	281	3.88		9.19	
	331	1.11		2.63	
	513	0.00		0.00	
	551	0.45		1.05	
	581	0.07		0.17	
	Total:		85.14	Total:	132.59
91	112	0.00		0.00	
	132	0.22		0.24	
	151	75.83		0.00	
	181	7.10		8.06	
	211	1.81		2.04	
	212	16.91		19.24	
	213	4.43		4.79	
	214	29.61		33.65	
	221	74.06		82.46	
	222	38.28		43.42	
	223	16.65		19.06	
	232	0.63		0.71	
	241	25.12		28.27	
	251	10.42		11.87	
	261	0.02		0.02	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	321	16.00		18.23	
	322	0.05		0.06	
	331	0.90		0.97	
	451	4.17		4.75	
	491	22.93		26.13	
	511	0.30		0.34	
	512	1.86		2.11	
	513	1.52		1.66	
	551	1.90		2.11	
	561	0.05		0.06	
	611	14.07		0.00	
	612	67.15		76.69	
		Total:	431.99	Total:	386.94
92	135	0.20		0.22	
	141	0.05		0.06	
	151	5.04		0.00	
	212	0.45		0.50	
	221	3.68		4.05	
	232	0.07		0.08	
	252	1.10		1.25	
	261	0.15		0.17	
	321	0.45		0.49	
	331	0.22		0.25	
	352	0.75		0.84	
	611	69.51		0.00	
		Total:	81.67	Total:	7.91
94	111	0.00		0.00	
	112	5.05		5.78	
	121	0.06		0.07	
	122	3.13		3.39	
	123	0.02		0.02	
	131	0.56		0.64	
	132	0.04		0.04	
	133	0.75		0.86	
	134	4.17		4.66	
	151	69.05		0.00	
	181	0.05		0.06	
	213	0.60		0.68	
	214	0.10		0.11	
	221	22.15		25.72	
	222	1.56		1.68	
	281	0.00		0.00	
	291	0.27		0.30	
	311	0.84		0.96	
	331	0.00		0.00	
	341	0.27		0.31	
	342	0.02		0.02	
	352	25.71		29.30	
	512	2.08		2.42	
	513	0.96		1.10	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	541	0.15		0.17	
	551	3.48		3.91	
	611	43.62		0.00	
	Total:		184.69	Total:	82.20
95	111	0.22		0.24	
	112	9.74		11.08	
	122	2.25		2.56	
	131	0.20		0.23	
	134	3.33		3.79	
	141	0.30		0.32	
	151	488.67		0.00	
	181	0.30		0.34	
	211	1.54		1.74	
	212	0.80		0.91	
	213	30.77		35.00	
	214	21.50		24.42	
	221	7.80		8.77	
	223	5.83		6.63	
	232	1.14		1.27	
	241	1.45		1.65	
	261	1.29		1.47	
	272	6.50		7.39	
	322	16.82		19.13	
	331	0.50		0.55	
	341	0.66		0.71	
	343	0.35		0.39	
	352	1.78		2.02	
	421	4.05		4.61	
	461	18.91		21.51	
	491	0.45		0.51	
	512	10.11		11.50	
	513	15.17		17.25	
	551	70.27		79.96	
	611	1.32		0.00	
	612	0.45		0.51	
	Total:		724.47	Total:	266.46
96	111	0.07		0.08	
	112	0.62		0.67	
	123	358.55		392.82	
	133	20.85		22.50	
	135	19.97		21.88	
	141	0.20		0.22	
	151	263.91		0.00	
	181	16.01		17.54	
	211	0.40		0.46	
	214	17.26		18.91	
	221	9.62		10.38	
	222	38.46		41.52	
	223	32.75		35.35	
	241	22.91		24.72	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	261	9.86		10.78	
	281	0.25		0.27	
	343	2.46		2.65	
	352	3.27		3.58	
	461	14.97		16.16	
	512	1.81		1.96	
	551	3.39		3.71	
	561	0.05		0.05	
	611	54.15		0.00	
	731	2.44		2.66	
		Total:	894.23	Total:	628.87
97	111	220.15		247.98	
	112	7.15		7.72	
	113	18.92		20.42	
	121	252.47		285.74	
	122	414.64		451.98	
	123	153.19		170.55	
	131	0.66		0.74	
	132	144.49		158.12	
	133	0.75		0.85	
	134	311.79		340.30	
	135	6.04		6.59	
	141	114.68		123.76	
	151	482.18		0.00	
	162	0.17		0.19	
	171	0.57		0.62	
	172	0.51		0.55	
	181	222.47		249.39	
	211	38.31		41.95	
	212	5.12		5.53	
	213	33.10		35.76	
	214	188.12		209.30	
	221	832.38		916.05	
	222	139.49		156.16	
	223	309.41		336.63	
	232	0.20		0.22	
	241	535.22		786.70	
	261	554.43		612.95	
	271	0.15		0.17	
	272	1.39		1.50	
	281	2.23		2.42	
	291	100.44		109.14	
	331	21.56		23.45	
	341	2.00		2.16	
	342	0.41		0.44	
	343	48.54		52.39	
	352	165.49		179.40	
	421	477.37		515.19	
	461	152.25		164.35	
	491	80.88		91.49	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	512	192.04		210.81	
	513	187.63		203.86	
	521	0.09		0.10	
	541	20.89		22.84	
	551	1.10		1.21	
	561	6.04		6.52	
	591	266.22		287.31	
	611	11113.85		0.00	
	612	0.13		0.14	
	711	29.60		33.48	
	725	0.19		0.21	
	731	14.01		15.32	
	791	0.39		0.44	
		Total:	17871.50	Total:	7091.09
99	111	303.50		303.50	
	112	13.22		13.22	
	113	17.72		17.72	
	121	154.94		154.94	
	122	21.78		21.78	
	123	266.14		266.14	
	131	38.61		38.61	
	132	662.58		662.58	
	133	0.35		0.35	
	134	4.16		4.16	
	135	4.64		4.64	
	141	0.14		0.14	
	151	109.61		0.00	
	171	142.93		142.93	
	172	12.64		12.64	
	181	214.09		214.09	
	211	194.90		194.90	
	212	25.45		25.45	
	213	83.81		83.81	
	214	114.36		114.36	
	221	460.68		460.68	
	222	16.54		16.54	
	223	42.31		42.31	
	241	43.59		43.59	
	261	8.33		8.33	
	271	0.68		0.68	
	272	49.70		49.70	
	281	2.47		2.47	
	291	33.21		33.21	
	331	3.33		3.33	
	343	7.60		7.60	
	351	7.66		7.66	
	352	97.73		97.73	
	431	9.59		9.59	
	451	0.94		0.94	
	461	85.33		85.33	

SIC-CODE	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	471	37.98		37.98	
	491	51.34		51.34	
	512	2.00		2.00	
	513	15.24		15.24	
	521	13.31		13.31	
	541	2.38		2.38	
	551	17.99		17.99	
	561	59.12		59.12	
	611	675.68		0.00	
	711	6.25		6.25	
	731	3.10		3.10	
		Total:	4139.65	Total:	3354.36

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
Unclassified	111	303.50		303.50	
	112	13.22		13.22	
	113	17.72		17.72	
	121	154.94		154.94	
	122	21.78		21.78	
	123	266.14		266.14	
	131	38.61		38.61	
	132	662.58		662.58	
	133	0.35		0.35	
	134	4.16		4.16	
	135	4.64		4.64	
	141	0.14		0.14	
	151	109.61		0.00	
	171	142.93		142.93	
	172	12.64		12.64	
	181	214.09		214.09	
	211	194.90		194.90	
	212	25.45		25.45	
	213	83.81		83.81	
	214	114.36		114.36	
	221	460.68		460.68	
	222	16.54		16.54	
	223	42.31		42.31	
	241	43.59		43.59	
	261	8.33		8.33	
	271	0.68		0.68	
	272	49.70		49.70	
	281	2.47		2.47	
	291	33.21		33.21	
	331	3.33		3.33	
	343	7.60		7.60	
	351	7.66		7.66	
	352	97.73		97.73	
	431	9.59		9.59	
	451	0.94		0.94	
	461	85.33		85.33	
	471	37.98		37.98	
	491	51.34		51.34	
	512	2.00		2.00	
	513	15.24		15.24	
	521	13.31		13.31	
	541	2.38		2.38	
	551	17.99		17.99	
	561	59.12		59.12	
	611	675.68		0.00	
	711	6.25		6.25	
	731	3.10		3.10	
		Total:	4139.65	Total:	3354.36
Agriculture and Mining	111	5.01		1.98	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	131	0.22		0.09	
	181	11.86		4.68	
	214	1.81		1.12	
	551	0.03		0.01	
	741	0.22		0.09	
		Total:	19.15	Total:	7.97
Construction	133	6.25		10.47	
	134	21.56		31.29	
	135	61.36		102.76	
	151	210.85		0.00	
	181	201.34		242.43	
	211	4.15		5.96	
	212	5.70		8.07	
	214	22.15		32.58	
	221	35.67		47.23	
	222	5.92		8.21	
	241	5.46		7.57	
	261	2.48		4.15	
	291	1.20		1.56	
	331	2.98		3.86	
	352	29.01		46.96	
	461	49.04		62.98	
	551	5.88		9.85	
	611	20.21		0.00	
		Total:	691.21	Total:	625.93
Manufacturing	111	10932.40		16553.10	
	112	2257.62		3334.87	
	113	443.85		813.50	
	121	1213.07		1996.26	
	122	2866.40		5119.47	
	123	3636.34		5789.42	
	131	3030.21		5367.97	
	132	12955.19		19978.70	
	133	2658.76		3182.67	
	134	9378.77		18994.99	
	135	2531.35		3584.20	
	141	844.93		1763.85	
	151	3266.68		0.00	
	161	4043.93		7729.59	
	162	5458.33		7744.49	
	171	5705.50		9895.72	
	172	60.06		78.43	
	181	10291.41		14926.22	
	211	2345.89		4518.51	
	212	3054.12		5624.81	
	213	484.92		844.18	
	214	18279.26		29657.30	
	221	68094.65		78654.79	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	222	11875.59		22368.96	
	223	3622.66		5970.47	
	231	23.80		38.30	
	232	3126.61		4994.01	
	241	5925.83		8308.80	
	251	2432.87		3912.95	
	252	148.91		349.73	
	261	613.41		789.76	
	271	164.25		279.20	
	272	273.91		344.39	
	281	196.97		279.72	
	291	304.06		468.67	
	311	59.70		95.15	
	321	611.40		834.73	
	322	9.39		13.42	
	331	261.59		357.05	
	341	138.36		276.54	
	342	183.31		257.22	
	343	1785.84		2762.21	
	351	35.53		54.67	
	352	7406.00		12882.73	
	411	3.39		5.12	
	421	307.46		700.01	
	431	57.30		70.74	
	441	633.84		1674.64	
	451	46.14		98.90	
	461	4002.31		5636.95	
	471	3.00		4.52	
	481	1946.05		3130.45	
	491	3565.42		5112.53	
	511	241.59		388.09	
	512	3656.31		5672.10	
	513	1543.23		2355.61	
	521	1053.14		1599.51	
	541	85.28		199.13	
	551	1178.26		1925.99	
	561	231.56		346.73	
	571	2309.39		3056.43	
	581	4912.05		7901.86	
	591	1789.00		2014.96	
	611	12507.86		0.00	
	711	54.59		86.21	
	721	566.97		941.98	
	722	38.50		37.71	
	723	1055.46		1441.58	
	724	0.89		1.00	
	725	0.86		1.71	
	726	47.36		85.40	
	731	31.76		46.99	
	741	33.02		44.81	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	751	15.53		20.77	
	791	200.77		215.94	
		Total:	255151.92	Total:	356610.09
Transportation, Communication, Utilities	111	881.42		1127.18	
	112	600.79		730.82	
	113	22.77		27.94	
	121	293.74		495.55	
	122	227.02		408.67	
	123	63.37		81.34	
	131	916.74		1403.77	
	132	3195.98		3973.97	
	133	48.55		69.24	
	134	448.86		735.30	
	135	8024.02		12029.40	
	141	3.15		4.74	
	151	2736.96		0.00	
	161	0.20		0.31	
	162	12.64		15.25	
	171	8.48		11.10	
	172	390.58		687.35	
	181	19690.64		39546.01	
	211	1050.27		1433.76	
	212	60.84		99.51	
	213	1646.04		2449.35	
	214	1757.53		2170.83	
	221	10307.04		18087.59	
	222	1181.79		1926.55	
	223	1343.60		2272.36	
	232	10.38		12.52	
	241	842.99		1454.55	
	252	18.76		22.63	
	261	4340.25		5468.88	
	272	38.86		48.04	
	281	0.79		0.95	
	291	59.51		71.88	
	311	0.22		0.27	
	331	62.25		109.11	
	341	1.36		1.95	
	343	248.36		490.53	
	351	284.69		343.87	
	352	1441.95		1864.76	
	421	1533.90		2697.41	
	431	15.01		33.67	
	441	20889.25		31034.81	
	451	0.66		1.06	
	461	352.58		628.59	
	481	10.42		23.08	
	491	80.15		141.02	
	511	8.42		10.16	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	512	271.19		362.66	
	513	885.65		1690.90	
	521	18.48		41.45	
	541	43.10		52.43	
	551	27.39		36.06	
	561	0.15		0.19	
	571	505.82		665.97	
	581	515.85		1156.98	
	591	16.85		29.72	
	611	3930.20		0.00	
	612	56.33		93.90	
	711	26.72		38.34	
	725	0.60		1.32	
	731	621.81		835.69	
	741	52.07		74.64	
	791	0.35		0.50	
		Total:	92126.34	Total:	139328.38
Wholesale Trade	111	0.90		1.44	
	112	0.08		0.14	
	113	0.47		0.71	
	121	9.79		15.69	
	122	1.83		3.30	
	123	19.61		33.92	
	131	0.45		0.72	
	132	0.01		0.02	
	133	7.33		11.75	
	134	0.68		1.00	
	135	0.40		0.72	
	151	25.28		0.00	
	171	0.84		1.35	
	181	318.30		573.83	
	211	353.89		613.92	
	212	90.15		153.78	
	213	2.46		3.94	
	214	59.10		97.82	
	221	5.72		9.53	
	222	8.12		13.01	
	223	3.64		6.57	
	232	2.98		5.38	
	241	34.01		61.35	
	251	40.18		72.48	
	261	1847.71		2960.83	
	343	72.80		112.15	
	352	2.61		4.54	
	411	13.48		21.60	
	451	7.18		11.51	
	461	0.25		0.40	
	491	4.58		8.26	
	512	126.53		198.08	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	541	0.22		0.35	
	551	0.35		0.51	
	611	391.30		0.00	
	731	4.66		7.47	
		Total:	3457.89	Total:	5008.07
Retail Trade	111	15.25		24.09	
	132	607.42		966.93	
	133	1.66		2.94	
	134	49.74		74.86	
	141	1170.25		1862.87	
	151	89.33		0.00	
	172	160.06		254.79	
	181	32.47		49.24	
	211	4.06		6.09	
	212	10.45		14.54	
	213	109.51		151.02	
	214	218.81		326.85	
	221	38.48		54.66	
	222	112.49		182.61	
	223	13.15		19.68	
	232	1.92		2.76	
	241	20.51		28.25	
	261	35.19		56.02	
	342	8.26		12.60	
	343	0.20		0.27	
	352	38.77		60.93	
	451	7.08		9.70	
	461	20.62		27.80	
	512	299.72		465.63	
	513	232.53		367.37	
	521	2.52		3.63	
	541	0.62		0.85	
	551	0.86		1.21	
	611	401.10		0.00	
	612	0.15		0.24	
	711	2.24		3.54	
	725	0.04		0.06	
		Total:	3705.46	Total:	5032.03
Finance, Insurance & Real Estate	111	40.45		57.42	
	113	0.22		0.37	
	123	0.22		0.37	
	135	5.14		9.87	
	151	145.49		0.00	
	181	552.80		784.77	
	214	29.68		56.75	
	221	1.35		2.15	
	261	37.07		60.65	
	331	0.18		0.30	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	351	0.30		0.48	
	512	0.35		0.56	
	541	50.16		71.33	
		Total:	863.41	Total:	1045.02
Services	111	386.86		869.70	
	112	175.79		252.11	
	113	1.19		2.75	
	121	1093.82		2491.41	
	122	1039.13		1454.03	
	123	0.44		0.84	
	131	1.94		4.13	
	132	66.12		161.33	
	133	14.53		30.22	
	134	176.81		325.10	
	135	31.55		22.25	
	141	0.67		1.16	
	151	2168.76		0.00	
	161	15.17		33.15	
	171	669.40		764.49	
	172	36.47		47.52	
	181	289.69		461.71	
	211	456.00		966.45	
	212	127.08		253.97	
	213	5181.58		11064.19	
	214	964.19		1668.03	
	221	799.28		1552.11	
	222	399.51		574.45	
	223	93.32		37.39	
	232	0.93		1.72	
	241	482.20		236.39	
	252	1.79		4.02	
	261	575.75		1036.49	
	271	4.12		9.68	
	272	24.46		48.84	
	281	3.88		9.19	
	291	1.39		2.06	
	311	10.89		20.22	
	322	14.99		19.23	
	331	15.75		24.65	
	341	3.21		6.76	
	343	159.57		209.16	
	351	0.86		1.78	
	352	145.07		291.41	
	451	7.56		10.21	
	461	40.30		54.58	
	491	72.10		100.06	
	511	0.60		0.87	
	512	336.43		683.20	
	513	4.83		7.53	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	521	8.75		0.00	
	531	0.60		0.68	
	541	338.11		750.87	
	551	267.91		490.80	
	561	10.72		16.01	
	581	8.62		0.18	
	611	750.31		0.00	
	612	15.52		24.28	
	711	0.04		0.06	
	723	1.14		2.36	
	725	0.65		0.86	
	728	0.91		2.72	
	731	4.27		9.88	
	741	0.74		0.91	
	751	3.08		6.38	
	791	60.98		133.27	
		Total:	17568.33	Total:	27255.80
Government	111	220.44		248.30	
	112	22.56		25.25	
	113	18.92		20.42	
	121	252.53		285.81	
	122	420.02		457.93	
	123	511.76		563.39	
	131	1.42		1.61	
	132	144.75		158.40	
	133	22.35		24.21	
	134	319.29		348.75	
	135	26.21		28.69	
	141	115.23		124.36	
	151	1391.42		0.00	
	162	0.17		0.19	
	171	0.57		0.62	
	172	0.51		0.55	
	181	245.93		275.39	
	211	42.06		46.19	
	212	23.94		26.91	
	213	70.03		77.47	
	214	263.95		294.46	
	221	949.75		1047.50	
	222	219.87		245.06	
	223	364.64		397.67	
	232	2.04		2.28	
	241	584.70		841.34	
	251	10.42		11.87	
	252	1.10		1.25	
	261	565.75		625.39	
	271	0.15		0.17	
	272	7.89		8.89	
	281	2.48		2.69	

INDUSTRIAL SECTOR	WASTE #	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	291	100.71		109.44	
	311	0.84		0.96	
	321	16.45		18.72	
	322	16.87		19.19	
	331	23.18		25.22	
	341	2.93		3.18	
	342	0.43		0.46	
	343	51.57		55.68	
	352	197.22		215.39	
	421	481.42		519.80	
	451	4.17		4.75	
	461	186.13		202.02	
	491	104.26		118.13	
	511	0.30		0.34	
	512	207.99		228.90	
	513	205.28		223.87	
	521	0.09		0.10	
	541	21.04		23.01	
	551	80.24		91.01	
	561	6.14		6.63	
	591	266.22		287.31	
	611	11296.52		0.00	
	612	67.73		77.34	
	711	29.60		33.48	
	725	0.19		0.21	
	731	16.45		17.98	
	791	0.39		0.44	
		Total:	20207.21	Total:	8476.57

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
8	NON-HALOGENATED SOLVENTS	0.90		0.76	
	Total:		0.90	Total:	0.76
10	HALOGENATED SOLVENTS	0.22		0.09	
	NON-HALOGENATED SOLVENTS	0.91		0.36	
	METAL-CONTAINING LIQUIDS	5.01		1.98	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.09	
	MISCELLANEOUS WASTES	11.89		4.69	
	Total:		18.25	Total:	7.21
15	WASTE OIL	2.08		2.50	
	HALOGENATED SOLVENTS	2.05		3.43	
	NON-HALOGENATED SOLVENTS	5.63		7.52	
	ORGANIC LIQUIDS	17.92		24.84	
	DIOXINS	2.48		4.15	
	OILY SLUDGES	5.92		8.21	
	DYE & PAINT SLUDGES AND RESINS	2.50		3.01	
	MISCELLANEOUS WASTES	41.47		0.00	
	Total:		80.05	Total:	53.66
16	HALOGENATED SOLVENTS	1.41		1.70	
	NON-HALOGENATED SOLVENTS	2.52		4.51	
	Total:		3.93	Total:	6.21
17	WASTE OIL	33.59		44.73	
	HALOGENATED SOLVENTS	0.69		0.83	
	NON-HALOGENATED SOLVENTS	19.70		28.62	
	ORGANIC LIQUIDS	9.89		16.92	
	OILY SLUDGES	29.01		46.96	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.46		7.57	
	DYE & PAINT SLUDGES AND RESINS	47.74		61.53	
	NON-METALLIC INORGANIC LIQUIDS	61.36		102.76	
	SOIL	20.21		0.00	
	MISCELLANEOUS WASTES	379.58		0.00	
	Total:		607.23	Total:	309.92
20	WASTE OIL	256.11		276.61	
	HALOGENATED SOLVENTS	1.45		1.58	
	NON-HALOGENATED SOLVENTS	236.65		244.77	
	ORGANIC LIQUIDS	24.99		28.62	
	PESTICIDES	8.41		5.99	
	OILY SLUDGES	51.88		66.52	
	DYE & PAINT SLUDGES AND RESINS	196.18		201.58	
	METAL-CONTAINING LIQUIDS	27.68		39.50	
	NON-METALLIC INORGANIC LIQUIDS	127.35		90.72	
	MISCELLANEOUS WASTES	308.35		334.09	
	Total:		1239.05	Total:	1289.98
22	NON-HALOGENATED SOLVENTS	0.45		0.60	
	ORGANIC LIQUIDS	0.45		0.60	
	NON-METALLIC INORGANIC LIQUIDS	2.62		3.48	
	MISCELLANEOUS WASTES	1.74		2.32	
	Total:		5.26	Total:	7.00
23	DYE & PAINT SLUDGES AND RESINS	1.14		1.51	
	Total:		1.14	Total:	1.51
24	WASTE OIL	1.66		2.24	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-HALOGENATED SOLVENTS	15.64		21.55	
	ORGANIC LIQUIDS	13.06		17.62	
	OILY SLUDGES	15.17		29.38	
	DYE & PAINT SLUDGES AND RESINS	11.22		14.96	
	METAL-CONTAINING LIQUIDS	80.04		155.00	
	MISCELLANEOUS WASTES	0.68		0.74	
	Total:		137.47	Total:	241.49
25	HALOGENATED SOLVENTS	1.35		2.61	
	NON-HALOGENATED SOLVENTS	51.22		63.93	
	OILY SLUDGES	0.22		0.37	
	DYE & PAINT SLUDGES AND RESINS	9.90		10.74	
	Total:		62.69	Total:	77.65
26	WASTE OIL	7.23		10.62	
	HALOGENATED SOLVENTS	19.66		17.14	
	NON-HALOGENATED SOLVENTS	118.84		196.31	
	DIOXINS	0.11		0.06	
	OILY SLUDGES	158.66		85.08	
	DYE & PAINT SLUDGES AND RESINS	2.04		1.09	
	METAL-CONTAINING LIQUIDS	0.02		0.02	
	NON-METALLIC INORGANIC LIQUIDS	34.40		37.30	
	MISCELLANEOUS WASTES	26.15		0.00	
	Total:		367.11	Total:	347.62
27	WASTE OIL	27.57		52.28	
	HALOGENATED SOLVENTS	28.62		50.48	
	NON-HALOGENATED SOLVENTS	264.99		429.71	
	ORGANIC LIQUIDS	52.84		105.10	
	DIOXINS	0.03		0.05	
	OILY SLUDGES	82.97		149.14	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	28.85		52.54	
	DYE & PAINT SLUDGES AND RESINS	30.30		47.49	
	METAL-CONTAINING SLUDGES	68.97		125.00	
	METAL-CONTAINING LIQUIDS	44.60		85.21	
	NON-METALLIC INORGANIC LIQUIDS	4.27		7.02	
	MISCELLANEOUS WASTES	64.47		0.00	
	Total:		698.48	Total:	1104.02
28	WASTE OIL	1231.89		1809.72	
	HALOGENATED SOLVENTS	463.83		738.26	
	NON-HALOGENATED SOLVENTS	12794.20		20286.06	
	ORGANIC LIQUIDS	2899.83		3850.66	
	PESTICIDES	3141.77		5025.95	
	DIOXINS	161.75		257.95	
	OILY SLUDGES	5398.00		8435.42	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	2432.28		3912.44	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	578.73		920.98	
	DYE & PAINT SLUDGES AND RESINS	2506.92		3927.06	
	METAL-CONTAINING SLUDGES	80.71		121.49	
	METAL-CONTAINING LIQUIDS	2935.39		4533.68	
	NON-METALLIC INORGANIC LIQUIDS	5958.44		9370.23	
	NON-METALLIC INORGANIC SLUDGES	3.37		5.42	
	SOIL	2311.00		0.00	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	MISCELLANEOUS WASTES	9955.52		15860.14	
		Total:	52853.63	Total:	79055.46
29	WASTE OIL	66168.72		77129.29	
	HALOGENATED SOLVENTS	27.79		39.05	
	NON-HALOGENATED SOLVENTS	193.41		272.29	
	ORGANIC LIQUIDS	1315.53		1807.73	
	DIOXINS	15.92		21.75	
	OILY SLUDGES	11609.91		22920.04	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.20		0.20	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	8173.23		10950.73	
	DYE & PAINT SLUDGES AND RESINS	0.22		0.30	
	METAL-CONTAINING LIQUIDS	8036.96		11876.01	
	NON-METALLIC INORGANIC LIQUIDS	541.24		1027.06	
	NON-METALLIC INORGANIC SLUDGES	632.01		1671.88	
	SOIL	6563.27		0.00	
	MISCELLANEOUS WASTES	17988.15		29273.34	
		Total:	121266.56	Total:	156989.67
30	WASTE OIL	86.73		112.24	
	HALOGENATED SOLVENTS	0.65		0.77	
	NON-HALOGENATED SOLVENTS	124.64		160.48	
	ORGANIC LIQUIDS	11.88		15.40	
	PESTICIDES	0.15		0.19	
	OILY SLUDGES	1.20		1.56	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	2.39		3.09	
	DYE & PAINT SLUDGES AND RESINS	10.11		14.13	
	METAL-CONTAINING LIQUIDS	8.34		9.55	
	NON-METALLIC INORGANIC SLUDGES	1.15		1.49	
	MISCELLANEOUS WASTES	5.83		8.20	
		Total:	253.07	Total:	327.10
31	WASTE OIL	5.21		5.66	
	NON-HALOGENATED SOLVENTS	6.67		7.25	
	ORGANIC LIQUIDS	0.22		0.24	
	OILY SLUDGES	96.12		104.43	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	718.59		827.71	
	DYE & PAINT SLUDGES AND RESINS	2.36		2.56	
	METAL-CONTAINING SLUDGES	353.85		384.43	
	NON-METALLIC INORGANIC LIQUIDS	0.22		0.24	
	SOIL	120.50		0.00	
	MISCELLANEOUS WASTES	1.36		1.48	
		Total:	1305.10	Total:	1334.00
32	WASTE OIL	99.19		120.82	
	HALOGENATED SOLVENTS	3.63		4.51	
	NON-HALOGENATED SOLVENTS	28.82		36.28	
	ORGANIC LIQUIDS	1.14		1.40	
	DIOXINS	244.95		299.21	
	OILY SLUDGES	29.46		36.08	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.68		0.83	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	97.64		109.54	
	DYE & PAINT SLUDGES AND RESINS	2.61		3.73	
	METAL-CONTAINING LIQUIDS	1.82		2.26	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	NON-METALLIC INORGANIC LIQUIDS	65.86		80.66	
	SOIL	327.77		0.00	
	MISCELLANEOUS WASTES	745.35		0.00	
	Total:		1648.92	Total:	695.32
33	WASTE OIL	910.73		1263.46	
	HALOGENATED SOLVENTS	7.95		9.32	
	NON-HALOGENATED SOLVENTS	42.63		49.08	
	ORGANIC LIQUIDS	1.25		1.77	
	DIOXINS	9.87		11.58	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	932.04		1189.73	
	METAL-CONTAINING SLUDGES	36.68		46.90	
	METAL-CONTAINING LIQUIDS	1582.26		2233.44	
	CYANIDE & METAL LIQUIDS	0.45		0.53	
	NON-METALLIC INORGANIC LIQUIDS	278.63		336.85	
	SOIL	333.68		0.00	
	MISCELLANEOUS WASTES	2052.28		0.00	
	Total:		6188.45	Total:	5142.66
34	WASTE OIL	235.13		462.53	
	HALOGENATED SOLVENTS	38.14		52.27	
	NON-HALOGENATED SOLVENTS	1028.07		1237.43	
	ORGANIC LIQUIDS	60.48		78.76	
	DIOXINS	19.41		21.38	
	OILY SLUDGES	1130.56		1379.93	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	13.42		14.78	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	512.47		790.80	
	DYE & PAINT SLUDGES AND RESINS	524.61		795.04	
	METAL-CONTAINING SLUDGES	341.94		476.54	
	METAL-CONTAINING LIQUIDS	4768.87		5426.53	
	CYANIDE & METAL LIQUIDS	13.20		16.90	
	NON-METALLIC INORGANIC LIQUIDS	1035.36		1288.27	
	SOIL	134.95		0.00	
	MISCELLANEOUS WASTES	2028.40		2247.27	
	Total:		11885.01	Total:	14288.43
35	WASTE OIL	384.44		855.01	
	HALOGENATED SOLVENTS	1204.09		2652.12	
	NON-HALOGENATED SOLVENTS	3746.27		8231.26	
	ORGANIC LIQUIDS	7794.25		17128.39	
	PESTICIDES	0.08		0.18	
	DIOXINS	8.22		18.06	
	OILY SLUDGES	1870.60		4110.80	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	4.89		11.94	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	693.16		1516.01	
	DYE & PAINT SLUDGES AND RESINS	46.90		103.84	
	METAL-CONTAINING SLUDGES	2221.20		4883.97	
	METAL-CONTAINING LIQUIDS	1885.78		4231.64	
	CYANIDE & METAL LIQUIDS	7.66		16.83	
	NON-METALLIC INORGANIC LIQUIDS	944.51		2083.48	
	NON-METALLIC INORGANIC SLUDGES	14.82		32.57	
	SOIL	718.48		0.00	
	MISCELLANEOUS WASTES	1059.16		2332.93	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	22604.51	Total:	48209.03
36	WASTE OIL	171.30		265.85	
	HALOGENATED SOLVENTS	373.00		542.20	
	NON-HALOGENATED SOLVENTS	2060.94		3194.93	
	ORGANIC LIQUIDS	575.56		762.34	
	DIOXINS	78.80		90.71	
	OILY SLUDGES	355.77		503.71	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	54.86		96.40	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	541.45		870.01	
	DYE & PAINT SLUDGES AND RESINS	118.17		182.85	
	METAL-CONTAINING SLUDGES	982.43		2050.67	
	METAL-CONTAINING LIQUIDS	5746.61		9905.10	
	CYANIDE & METAL LIQUIDS	9.08		15.16	
	NON-METALLIC INORGANIC LIQUIDS	5265.20		9066.82	
	NON-METALLIC INORGANIC SLUDGES	1120.05		1741.12	
	SOIL	722.47		0.00	
	MISCELLANEOUS WASTES	1845.31		2935.52	
		Total:	20021.00	Total:	32223.39
37	WASTE OIL	2057.28		2052.17	
	HALOGENATED SOLVENTS	92.11		91.12	
	NON-HALOGENATED SOLVENTS	884.61		1066.86	
	ORGANIC LIQUIDS	1371.15		1612.48	
	DIOXINS	105.63		114.65	
	OILY SLUDGES	405.03		496.67	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	18.03		34.00	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	200.65		198.35	
	DYE & PAINT SLUDGES AND RESINS	1419.16		1538.09	
	METAL-CONTAINING SLUDGES	1574.51		1679.35	
	METAL-CONTAINING LIQUIDS	1196.13		1174.52	
	CYANIDE & METAL LIQUIDS	16.73		16.39	
	NON-METALLIC INORGANIC LIQUIDS	633.92		623.16	
	NON-METALLIC INORGANIC SLUDGES	117.93		145.59	
	SOIL	1235.27		0.00	
	MISCELLANEOUS WASTES	1705.22		1949.24	
		Total:	13033.36	Total:	12792.64
38	WASTE OIL	74.12		206.76	
	HALOGENATED SOLVENTS	114.18		354.94	
	NON-HALOGENATED SOLVENTS	208.90		590.05	
	ORGANIC LIQUIDS	22.29		62.15	
	DIOXINS	0.48		1.35	
	OILY SLUDGES	22.09		63.01	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	5.71		16.70	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	84.75		237.25	
	DYE & PAINT SLUDGES AND RESINS	58.99		161.93	
	METAL-CONTAINING SLUDGES	43.81		123.43	
	METAL-CONTAINING LIQUIDS	495.98		1364.36	
	CYANIDE & METAL LIQUIDS	7.47		20.40	
	NON-METALLIC INORGANIC LIQUIDS	74.52		210.08	
	NON-METALLIC INORGANIC SLUDGES	165.80		451.95	
	SOIL	40.47		0.00	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	MISCELLANEOUS WASTES	143.53		400.64	
	Total:		1563.09	Total:	4265.00
39	HALOGENATED SOLVENTS	2.46		6.95	
	NON-HALOGENATED SOLVENTS	11.35		37.45	
	ORGANIC LIQUIDS	0.12		0.37	
	DYE & PAINT SLUDGES AND RESINS	0.67		2.03	
	METAL-CONTAINING SLUDGES	1.40		3.94	
	METAL-CONTAINING LIQUIDS	0.22		0.62	
	MISCELLANEOUS WASTES	1.80		5.07	
	Total:		18.02	Total:	56.43
40	WASTE OIL	261.19		453.98	
	NON-HALOGENATED SOLVENTS	0.60		0.93	
	ORGANIC LIQUIDS	0.35		0.54	
	DIOXINS	0.20		0.35	
	OILY SLUDGES	1.49		2.30	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.45		0.69	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	43.34		96.00	
	METAL-CONTAINING LIQUIDS	14.44		25.40	
	NON-METALLIC INORGANIC LIQUIDS	20.24		44.67	
	SOIL	27.01		0.00	
	MISCELLANEOUS WASTES	4.27		0.00	
	Total:		373.58	Total:	624.86
41	WASTE OIL	11.98		21.07	
	NON-HALOGENATED SOLVENTS	23.75		40.94	
	ORGANIC LIQUIDS	56.91		100.19	
	DIOXINS	7.00		12.35	
	OILY SLUDGES	339.19		589.18	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	61.36		108.19	
	NON-METALLIC INORGANIC LIQUIDS	191.13		336.21	
	SOIL	854.99		0.00	
	MISCELLANEOUS WASTES	5.47		0.00	
	Total:		1551.78	Total:	1208.13
42	WASTE OIL	49.76		82.63	
	HALOGENATED SOLVENTS	308.69		442.19	
	NON-HALOGENATED SOLVENTS	65.20		93.70	
	ORGANIC LIQUIDS	76.82		145.38	
	OILY SLUDGES	26.46		39.69	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	263.03		396.62	
	DYE & PAINT SLUDGES AND RESINS	1.58		2.27	
	METAL-CONTAINING LIQUIDS	32.84		55.78	
	CYANIDE & METAL LIQUIDS	26.72		38.34	
	NON-METALLIC INORGANIC LIQUIDS	55.04		87.67	
	SOIL	29.79		0.00	
	MISCELLANEOUS WASTES	336.83		489.53	
	Total:		1272.76	Total:	1873.80
43	WASTE OIL	0.06		0.07	
	NON-HALOGENATED SOLVENTS	9.15		10.04	
	ORGANIC LIQUIDS	0.22		0.25	
	OILY SLUDGES	2.30		2.53	
	MISCELLANEOUS WASTES	6.93		0.00	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	18.66	Total:	12.89
44	WASTE OIL	367.41		566.88	
	NON-HALOGENATED SOLVENTS	3.12		5.00	
	ORGANIC LIQUIDS	337.95		521.44	
	DIOXINS	0.02		0.04	
	OILY SLUDGES	284.20		452.50	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	271.52		419.64	
	DYE & PAINT SLUDGES AND RESINS	20.54		32.85	
	METAL-CONTAINING LIQUIDS	6.68		10.31	
	NON-METALLIC INORGANIC LIQUIDS	825.45		1273.61	
	SOIL	10.84		0.00	
	MISCELLANEOUS WASTES	47.91		0.00	
		Total:	2175.64	Total:	3282.27
45	WASTE OIL	1710.17		3016.40	
	HALOGENATED SOLVENTS	150.69		265.78	
	NON-HALOGENATED SOLVENTS	74.57		132.51	
	ORGANIC LIQUIDS	2.06		3.62	
	OILY SLUDGES	12.07		22.37	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.89		10.39	
	DYE & PAINT SLUDGES AND RESINS	288.72		509.25	
	METAL-CONTAINING LIQUIDS	206.61		364.41	
	NON-METALLIC INORGANIC LIQUIDS	3.26		5.74	
	NON-METALLIC INORGANIC SLUDGES	1519.31		2679.81	
	SOIL	337.07		0.00	
	MISCELLANEOUS WASTES	432.17		0.00	
		Total:	4742.59	Total:	7010.28
46	OILY SLUDGES	53.20		119.55	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	80.93		195.70	
		Total:	134.13	Total:	315.25
48	WASTE OIL	30.43		56.86	
	HALOGENATED SOLVENTS	4.13		6.14	
	NON-HALOGENATED SOLVENTS	10.73		20.92	
	ORGANIC LIQUIDS	29.04		52.80	
	OILY SLUDGES	19.48		39.29	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.66		1.06	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	37.63		79.35	
	DYE & PAINT SLUDGES AND RESINS	30.29		70.14	
	METAL-CONTAINING LIQUIDS	94.24		153.14	
	NON-METALLIC INORGANIC LIQUIDS	16.80		33.01	
	MISCELLANEOUS WASTES	298.32		0.00	
		Total:	571.75	Total:	512.71
49	WASTE OIL	9219.70		16162.13	
	HALOGENATED SOLVENTS	638.83		794.29	
	NON-HALOGENATED SOLVENTS	3286.44		4425.69	
	ORGANIC LIQUIDS	244.00		473.05	
	PESTICIDES	10.38		12.52	
	DIOXINS	4954.84		6291.83	
	OILY SLUDGES	1898.07		2549.51	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	284.24		343.18	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	684.02		978.28	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	DYE & PAINT SLUDGES AND RESINS	110.61		134.95	
	METAL-CONTAINING SLUDGES	8.48		11.10	
	METAL-CONTAINING LIQUIDS	4016.93		4988.98	
	NON-METALLIC INORGANIC LIQUIDS	8743.14		12901.53	
	NON-METALLIC INORGANIC SLUDGES	20937.33		31127.53	
	SOIL	2670.50		0.00	
	MISCELLANEOUS WASTES	23596.60		47381.28	
	Total:		81304.11	Total:	128575.85
50	WASTE OIL	7.27		12.75	
	HALOGENATED SOLVENTS	122.50		196.97	
	NON-HALOGENATED SOLVENTS	40.80		66.04	
	ORGANIC LIQUIDS	18.19		29.06	
	DIOXINS	1852.37		2968.30	
	OILY SLUDGES	2.61		4.54	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	1.32		2.12	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	25.46		45.93	
	METAL-CONTAINING LIQUIDS	0.61		0.98	
	NON-METALLIC INORGANIC LIQUIDS	0.95		1.57	
	SOIL	371.57		0.00	
	MISCELLANEOUS WASTES	440.25		0.00	
	Total:		2883.90	Total:	3328.26
51	WASTE OIL	2.09		3.35	
	HALOGENATED SOLVENTS	231.39		416.95	
	NON-HALOGENATED SOLVENTS	110.91		189.50	
	ORGANIC LIQUIDS	62.62		95.84	
	PESTICIDES	2.98		5.38	
	OILY SLUDGES	8.12		13.01	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	46.04		81.87	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	13.13		23.68	
	DYE & PAINT SLUDGES AND RESINS	0.25		0.40	
	METAL-CONTAINING SLUDGES	0.84		1.35	
	METAL-CONTAINING LIQUIDS	10.09		16.17	
	NON-METALLIC INORGANIC LIQUIDS	21.89		37.94	
	NON-METALLIC INORGANIC SLUDGES	13.48		21.60	
	SOIL	19.73		0.00	
	MISCELLANEOUS WASTES	30.43		48.76	
	Total:		573.99	Total:	955.80
52	NON-HALOGENATED SOLVENTS	1.95		2.78	
	PESTICIDES	1.92		2.76	
	OILY SLUDGES	15.09		21.71	
	MISCELLANEOUS WASTES	0.45		0.65	
	Total:		19.41	Total:	27.90
53	WASTE OIL	1.14		1.54	
	NON-HALOGENATED SOLVENTS	40.39		54.57	
	DYE & PAINT SLUDGES AND RESINS	20.62		27.80	
	Total:		62.15	Total:	83.91
54	WASTE OIL	2.52		4.01	
	NON-HALOGENATED SOLVENTS	0.45		0.72	
	OILY SLUDGES	5.83		9.28	
	MISCELLANEOUS WASTES	108.57		172.83	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	117.37	Total:	186.84
55	WASTE OIL	44.50		63.36	
	HALOGENATED SOLVENTS	1.11		1.52	
	NON-HALOGENATED SOLVENTS	268.52		391.25	
	ORGANIC LIQUIDS	59.81		90.60	
	DIOXINS	35.19		56.02	
	OILY SLUDGES	92.07		152.34	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	7.08		9.70	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	20.51		28.25	
	METAL-CONTAINING LIQUIDS	607.46		966.99	
	NON-METALLIC INORGANIC SLUDGES	2.52		3.63	
	SOIL	400.06		0.00	
	MISCELLANEOUS WASTES	1630.39		2581.50	
		Total:	3169.22	Total:	4345.16
56	HALOGENATED SOLVENTS	0.66		0.95	
		Total:	0.66	Total:	0.95
57	WASTE OIL	0.25		0.34	
	NON-HALOGENATED SOLVENTS	1.43		1.96	
	ORGANIC LIQUIDS	0.05		0.07	
	OILY SLUDGES	1.20		1.64	
	MISCELLANEOUS WASTES	14.05		0.00	
		Total:	16.98	Total:	4.01
59	WASTE OIL	3.22		5.09	
	HALOGENATED SOLVENTS	2.29		3.62	
	NON-HALOGENATED SOLVENTS	26.03		41.13	
	OILY SLUDGES	37.07		58.57	
	METAL-CONTAINING LIQUIDS	15.25		24.09	
	CYANIDE & METAL LIQUIDS	2.24		3.54	
	SOIL	1.04		0.00	
	MISCELLANEOUS WASTES	232.53		367.37	
		Total:	319.67	Total:	503.41
60	NON-HALOGENATED SOLVENTS	27.97		53.72	
	METAL-CONTAINING LIQUIDS	40.45		57.42	
	MISCELLANEOUS WASTES	602.52		855.35	
		Total:	670.94	Total:	966.49
61	NON-METALLIC INORGANIC LIQUIDS	0.44		0.74	
	MISCELLANEOUS WASTES	0.44		0.75	
		Total:	0.88	Total:	1.49
63	NON-HALOGENATED SOLVENTS	0.91		1.76	
	MISCELLANEOUS WASTES	0.18		0.30	
		Total:	1.09	Total:	2.06
65	DIOXINS	37.07		60.65	
	NON-METALLIC INORGANIC LIQUIDS	5.14		9.87	
	MISCELLANEOUS WASTES	145.49		0.00	
		Total:	187.70	Total:	70.52
67	WASTE OIL	1.35		2.15	
	NON-HALOGENATED SOLVENTS	0.80		1.27	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.30		0.48	
	MISCELLANEOUS WASTES	0.35		0.56	
		Total:	2.80	Total:	4.46

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
70	NON-HALOGENATED SOLVENTS	0.22		0.35	
	MISCELLANEOUS WASTES	493.81		0.00	
	Total:		494.03	Total:	0.35
72	HALOGENATED SOLVENTS	31.62		33.81	
	NON-HALOGENATED SOLVENTS	0.63		0.85	
	OILY SLUDGES	22.76		25.99	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	55.24		58.19	
	METAL-CONTAINING SLUDGES	669.06		763.99	
	MISCELLANEOUS WASTES	98.19		0.00	
	Total:		877.50	Total:	882.83
73	WASTE OIL	570.54		1275.75	
	HALOGENATED SOLVENTS	396.32		894.74	
	NON-HALOGENATED SOLVENTS	5325.06		11734.90	
	ORGANIC LIQUIDS	187.68		426.37	
	PESTICIDES	0.23		0.67	
	DIOXINS	251.97		585.11	
	OILY SLUDGES	141.92		317.82	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	3.93		8.14	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	38.09		78.76	
	DYE & PAINT SLUDGES AND RESINS	26.31		60.45	
	METAL-CONTAINING SLUDGES	0.12		0.25	
	METAL-CONTAINING LIQUIDS	1533.92		3507.38	
	NON-METALLIC INORGANIC LIQUIDS	110.77		245.06	
	SOIL	509.42		0.00	
	MISCELLANEOUS WASTES	1299.77		2905.46	
	Total:		10396.05	Total:	22040.86
75	WASTE OIL	8.23		10.59	
	HALOGENATED SOLVENTS	2.60		3.43	
	NON-HALOGENATED SOLVENTS	453.04		571.68	
	ORGANIC LIQUIDS	60.14		73.49	
	DIOXINS	3.40		4.62	
	OILY SLUDGES	131.64		184.99	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	7.07		9.49	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	109.63		129.73	
	DYE & PAINT SLUDGES AND RESINS	30.28		34.58	
	METAL-CONTAINING LIQUIDS	8.54		11.34	
	NON-METALLIC INORGANIC LIQUIDS	0.85		0.97	
	SOIL	44.66		0.00	
	MISCELLANEOUS WASTES	26.03		32.37	
	Total:		886.11	Total:	1067.28
76	WASTE OIL	13.79		18.31	
	HALOGENATED SOLVENTS	16.64		22.53	
	NON-HALOGENATED SOLVENTS	411.75		556.00	
	ORGANIC LIQUIDS	31.27		42.97	
	DIOXINS	199.52		270.12	
	OILY SLUDGES	159.97		208.69	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.41		0.56	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	5.64		7.61	
	DYE & PAINT SLUDGES AND RESINS	0.63		0.79	
	METAL-CONTAINING SLUDGES	0.22		0.25	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	METAL-CONTAINING LIQUIDS	3.88		5.15	
	NON-METALLIC INORGANIC LIQUIDS	1165.26		1601.40	
	MISCELLANEOUS WASTES	36.90		0.00	
	Total:		2045.88	Total:	2734.38
78	HALOGENATED SOLVENTS	0.41		0.56	
	NON-HALOGENATED SOLVENTS	24.74		40.77	
	OILY SLUDGES	0.57		0.94	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	0.09		0.18	
	DYE & PAINT SLUDGES AND RESINS	2.52		4.15	
	MISCELLANEOUS WASTES	0.01		0.02	
	Total:		28.34	Total:	46.62
79	WASTE OIL	2.40		3.25	
	NON-HALOGENATED SOLVENTS	3.36		5.12	
	ORGANIC LIQUIDS	10.50		14.24	
	PESTICIDES	0.10		0.14	
	DIOXINS	1.60		2.17	
	OILY SLUDGES	5.85		8.44	
	NON-METALLIC INORGANIC LIQUIDS	0.00		0.00	
	MISCELLANEOUS WASTES	114.36		0.00	
	Total:		138.17	Total:	33.36
80	WASTE OIL	5.45		8.24	
	HALOGENATED SOLVENTS	7.09		9.24	
	NON-HALOGENATED SOLVENTS	7.22		10.04	
	ORGANIC LIQUIDS	0.45		0.55	
	DIOXINS	49.47		79.80	
	OILY SLUDGES	0.20		0.27	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.25		1.53	
	DYE & PAINT SLUDGES AND RESINS	3.25		4.84	
	METAL-CONTAINING LIQUIDS	2.53		3.63	
	NON-METALLIC INORGANIC LIQUIDS	3.07		4.46	
	SOIL	18.89		0.00	
	MISCELLANEOUS WASTES	252.52		332.18	
	Total:		351.39	Total:	454.78
82	WASTE OIL	153.45		224.45	
	HALOGENATED SOLVENTS	2.06		3.05	
	NON-HALOGENATED SOLVENTS	38.93		56.39	
	ORGANIC LIQUIDS	8.75		13.62	
	PESTICIDES	0.60		0.91	
	DIOXINS	74.06		104.55	
	OILY SLUDGES	41.83		62.02	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	44.79		63.21	
	DYE & PAINT SLUDGES AND RESINS	7.28		10.35	
	METAL-CONTAINING LIQUIDS	0.63		0.88	
	CYANIDE & METAL LIQUIDS	0.04		0.06	
	NON-METALLIC INORGANIC LIQUIDS	7.56		11.19	
	SOIL	3.54		0.00	
	MISCELLANEOUS WASTES	1189.06		1696.64	
	Total:		1572.58	Total:	2247.32
83	NON-HALOGENATED SOLVENTS	1.77		2.54	
	SOIL	1.10		0.00	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
		Total:	2.87	Total:	2.54
84	MISCELLANEOUS WASTES	2.24		0.00	
		Total:	2.24	Total:	0.00
86	NON-HALOGENATED SOLVENTS	0.90		1.34	
	OILY SLUDGES	0.01		0.01	
		Total:	0.91	Total:	1.35
87	WASTE OIL	112.48		0.00	
	NON-HALOGENATED SOLVENTS	2.60		0.00	
	ORGANIC LIQUIDS	55.33		0.00	
	OILY SLUDGES	5.03		0.00	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	300.84		0.00	
	NON-METALLIC INORGANIC LIQUIDS	20.85		0.00	
	NON-METALLIC INORGANIC SLUDGES	8.75		0.00	
	SOIL	172.70		0.00	
	MISCELLANEOUS WASTES	8.54		0.00	
		Total:	687.12	Total:	0.00
89	WASTE OIL	26.26		48.91	
	NON-HALOGENATED SOLVENTS	2.63		6.21	
	OILY SLUDGES	34.80		56.69	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	0.61		1.44	
	DYE & PAINT SLUDGES AND RESINS	3.88		9.19	
	METAL-CONTAINING LIQUIDS	0.00		0.00	
	NON-METALLIC INORGANIC LIQUIDS	2.66		6.30	
	MISCELLANEOUS WASTES	14.30		0.00	
		Total:	85.14	Total:	128.74
91	WASTE OIL	90.71		101.52	
	HALOGENATED SOLVENTS	1.81		2.04	
	NON-HALOGENATED SOLVENTS	50.95		57.68	
	PESTICIDES	0.63		0.71	
	DIOXINS	0.02		0.02	
	OILY SLUDGES	38.28		43.42	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	14.59		16.62	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	64.05		72.63	
	METAL-CONTAINING LIQUIDS	0.22		0.24	
	NON-METALLIC INORGANIC LIQUIDS	0.00		0.00	
	SOIL	14.07		0.00	
	MISCELLANEOUS WASTES	156.66		0.00	
		Total:	431.99	Total:	294.88
92	WASTE OIL	3.68		4.05	
	NON-HALOGENATED SOLVENTS	0.45		0.50	
	PESTICIDES	0.07		0.08	
	DIOXINS	0.15		0.17	
	OILY SLUDGES	0.75		0.84	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.55		1.74	
	NON-METALLIC INORGANIC LIQUIDS	0.20		0.22	
	SOIL	69.51		0.00	
	MISCELLANEOUS WASTES	5.31		6.85	
		Total:	81.67	Total:	14.45
94	WASTE OIL	22.15		25.72	
	NON-HALOGENATED SOLVENTS	0.70		0.79	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	ORGANIC LIQUIDS	5.21		5.85	
	OILY SLUDGES	27.27		30.98	
	DYE & PAINT SLUDGES AND RESINS	0.27		0.30	
	METAL-CONTAINING LIQUIDS	0.10		0.11	
	NON-METALLIC INORGANIC LIQUIDS	8.76		9.83	
	SOIL	43.62		0.00	
	MISCELLANEOUS WASTES	76.61		0.00	
	Total:		184.69	Total:	73.58
95	WASTE OIL	13.63		15.40	
	HALOGENATED SOLVENTS	1.54		1.74	
	NON-HALOGENATED SOLVENTS	53.07		60.33	
	ORGANIC LIQUIDS	4.34		4.89	
	PESTICIDES	1.14		1.27	
	DIOXINS	1.29		1.47	
	OILY SLUDGES	1.78		2.02	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	1.90		2.16	
	DYE & PAINT SLUDGES AND RESINS	25.41		28.90	
	METAL-CONTAINING LIQUIDS	0.22		0.24	
	NON-METALLIC INORGANIC LIQUIDS	12.19		13.87	
	NON-METALLIC INORGANIC SLUDGES	4.05		4.61	
	SOIL	1.32		0.00	
	MISCELLANEOUS WASTES	602.59		657.97	
	Total:		724.47	Total:	794.87
96	WASTE OIL	42.37		45.73	
	HALOGENATED SOLVENTS	0.40		0.46	
	NON-HALOGENATED SOLVENTS	17.26		18.91	
	ORGANIC LIQUIDS	23.31		25.15	
	DIOXINS	12.30		13.44	
	OILY SLUDGES	41.73		45.10	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	22.91		24.72	
	DYE & PAINT SLUDGES AND RESINS	15.22		16.43	
	METAL-CONTAINING LIQUIDS	0.07		0.08	
	NON-METALLIC INORGANIC LIQUIDS	379.14		415.37	
	SOIL	54.15		0.00	
	MISCELLANEOUS WASTES	285.37		308.31	
	Total:		894.23	Total:	913.70
97	WASTE OIL	1141.79		1252.68	
	HALOGENATED SOLVENTS	38.31		41.95	
	NON-HALOGENATED SOLVENTS	226.34		250.59	
	ORGANIC LIQUIDS	363.49		396.14	
	PESTICIDES	0.20		0.22	
	DIOXINS	568.44		628.27	
	OILY SLUDGES	304.98		335.56	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	616.10		878.19	
	DYE & PAINT SLUDGES AND RESINS	256.46		277.58	
	METAL-CONTAINING SLUDGES	0.57		0.62	
	METAL-CONTAINING LIQUIDS	617.30		692.05	
	CYANIDE & METAL LIQUIDS	29.60		33.48	
	NON-METALLIC INORGANIC LIQUIDS	600.99		658.44	
	NON-METALLIC INORGANIC SLUDGES	477.46		515.29	

SIC-CODE	WASTE GROUP	QUANTITY (TONS, 1986)	TOTALS (1986)	QUANTITY (TONS, 2000)	TOTALS (2000)
	SOIL	11113.85		0.00	
	MISCELLANEOUS WASTES	1515.62		1667.07	
		Total:	17871.50	Total:	7628.13
99	WASTE OIL	502.99		502.99	
	HALOGENATED SOLVENTS	194.90		194.90	
	NON-HALOGENATED SOLVENTS	223.62		223.62	
	ORGANIC LIQUIDS	12.11		12.11	
	DIOXINS	11.43		11.43	
	OILY SLUDGES	114.27		114.27	
	HALOGENATED ORGANIC SLUDGES & SOLIDS	8.60		8.60	
	NON-HALOGEN ORGANIC SLUDGES & SOLIDS	132.91		132.91	
	DYE & PAINT SLUDGES AND RESINS	171.39		171.39	
	METAL-CONTAINING SLUDGES	142.93		142.93	
	METAL-CONTAINING LIQUIDS	1121.02		1121.02	
	CYANIDE & METAL LIQUIDS	6.25		6.25	
	NON-METALLIC INORGANIC LIQUIDS	362.11		362.11	
	NON-METALLIC INORGANIC SLUDGES	22.90		22.90	
	SOIL	675.68		0.00	
	MISCELLANEOUS WASTES	436.54		436.54	
		Total:	4139.65	Total:	3463.97

HAZARDOUS WASTE GENERATION PROJECTIONS BY INDUSTRIAL SECTOR IN THE SAN FRANCISCO BAY REGION FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

INDUSTRIAL SECTOR	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Unclassified	3,354	3,019	2,013
Agriculture & Mining	8	7	5
Construction	626	563	376
Manufacturing	356,610	320,949	213,966
Transport, Communication, Utilities	139,328	125,396	83,597
Wholesale Trade	5,008	4,507	3,005
Retail Trade	5,032	4,529	3,019
Finance, Insurance, & Real Estate	1,045	941	627
Services	27,256	24,530	16,353
Government	8,477	7,629	5,086
TOTALS	546,744	492,070	328,047

HAZARDOUS WASTE GENERATION PROJECTIONS BY WASTE GROUP IN THE SAN FRANCISCO BAY REGION FOR THE YEAR 2000, USING THREE REDUCTION SCENARIOS

WASTE GROUP	+-----ESTIMATED TONS-----+		
	No Reduction	10% Reduction	40% Reduction
Waste Oil	108,663	97,796	65,198
Halogenated Solvents	7,906	7,116	4,744
Non-halogenated Solvents	55,301	49,771	33,181
Organic Liquids	28,044	25,239	16,826
Pesticides	5,057	4,551	3,034
Dioxins	11,932	10,738	7,159
Oily Sludges	43,953	39,558	26,372
Halogenated Organic Sludges & Solids	4,570	4,113	2,742
Non-halogenated Organic Sludges&Solids	21,509	19,358	12,905
Dye & Paint Sludges & Resins	8,470	7,623	5,082
Metal-Containing Sludges	10,816	9,735	6,490
Metal-Containing Liquids	53,045	47,741	31,827
Cyanide & Metal Liquids	168	151	101
Non-metallic Inorganic Liquids	42,390	38,151	25,434
Non-metallic Inorganic Sludges	38,425	34,583	23,055
Contaminated Soil	0	0	0
Miscellaneous Wastes	106,495	95,845	63,897
TOTALS	546,744	492,070	328,047

APPENDIX 7

DHS-RECOMMENDED TABLES BASED UPON COUNTY DATA TABLE OF CONTENTS

	<u>page</u>
TABLE A: Quantities of Waste Shipped Off-site in the Current Year	7-1
TABLE B: Current Regional Needs Assessment for Commercial Hazardous Waste Treatment/Disposal Capacity	7-2
TABLE C: Commercial Hazardous Waste Treatment/Disposal Facilities and Their Capacities and Quantities of Waste Treated or Disposed of in Current Year	7-3
TABLE D: Current Needs Assessment for Commercial Hazardous Waste Treatment/Disposal Capacity in Current Year	7-5
TABLE E: Quantities of Hazardous Waste Imported into Counties in the Current Year	7-7
TABLE F: Quantities of Hazardous Waste Exported from Counties in the Current Year	7-8
TABLE G: Commercial Hazardous Waste Storage Capacity and Activity in the Current Year	7-9
TABLE H: On-site Treatment/Disposal of Hazardous Waste in Current Year	7-10
TABLE I-1: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Manifested Wastes	7-11
TABLE I-2: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Cleanup Wastes	7-12
TABLE I-3: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Transfer Station Wastes	7-13
TABLE I-4: Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Small Quantity Generator Wastes	7-14

TABLE I-5:	Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Household Wastes	7-15
TABLE I-6:	Planning Estimate of Quantities of Hazardous Waste Shipped Off-site by Generators in the San Francisco Bay Region in 1986 - Total for Table I	7-16
TABLE L-1:	Projected Quantities of Clean-up Wastes in 2000 - Underground Tanks	7-17
TABLE L-2:	Projected Quantities of Clean-up Wastes in 2000 - Old Disposal Sites	7-18
TABLE L-3:	Projected Quantities of Clean-up Wastes in 2000 - Closed Toxic Pits	7-19
TABLE L-4:	Projected Quantities of Clean-up Wastes in 2000 - Other Cleanup Wastes	7-20
TABLE L-5:	Projected Quantities of Clean-up Wastes in 2000 - Table L Total	7-21
TABLE M-1:	Projected Quantities of New Hazardous Waste Streams - Additional Pretreatment Sludge	7-22
TABLE M-2:	Projected Quantities of New Hazardous Waste Streams - Other New Wastes	7-23
TABLE M-3:	Projected Quantities of New Hazardous Waste Streams - Totals	7-24
TABLE N-1:	Total Projected Quantities of Hazardous Waste Generation - Projected Industrial Waste	7-25
TABLE N-2:	Total Projected Quantities of Hazardous Waste Generation - Projected Clean-up Waste	7-26
TABLE N-3:	Total Projected Quantities of Hazardous Waste Generation - Projected New Wastes	7-27
TABLE N-4:	Total Projected Quantities of Hazardous Waste Generation - Projected Household Waste	7-28
TABLE N-5:	Total Projected Quantities of Hazardous Waste Generation - Total Projected Wastes	7-29
TABLE O-1:	Projected Commercial Hazardous Waste Treatment/Disposal Capacities - Capacity from Existing Facilities	7-30
TABLE O-2:	Projected Commercial Hazardous Waste Treatment/Disposal Capacities - Capacity from Proposed Facilities	7-31

TABLE O-3:	Projected Commercial Hazardous Waste Treatment/ Disposal Capacities - Loss of Capacity from Closing Facilities	7-32
TABLE O-4:	Projected Commercial Hazardous Waste Treatment/ Disposal Capacities - Total Projected Treatment Capacities by County	7-33
TABLE P-1:	Projected County Needs Assessment for Commercial Hazardous Waste Treatment Facilities - Projected County Capacity Requirement	7-34
TABLE P-2:	Projected County Needs Assessment for Commercial Hazardous Waste Treatment Facilities - Projected County Capacity	7-35
TABLE P-3:	Projected County Needs Assessment for Commercial Hazardous Waste Treatment Facilities - Projected Capacity Excess or Deficiency	7-36
TABLE Q-1:	Projected Quantities of Residuals Generation - Projected Capacity Requirement	7-37
TABLE Q-2:	Projected Quantities of Residuals Generation - Projected Quantity of Residuals	7-38

QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE IN THE CURRENT YEAR, IN TONS (DHS Table A)

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S. M.	S. C.	Solano	Sonoma	Region
Waste Oil	16,535	19,062	54	10	1,061	7,211	11,200	1,263	864	57,260
Halogenated Solvents	1,013	460	11	4	9	694	2,280	15	181	4,667
Non-Halogenated Solvents	6,671	1,989	108	10	462	10,694	11,800	139	1,770	33,643
Organic Liquids	1,733	2,625	55	4	2,287	473	8,950	70	51	16,248
Pesticides	7	705	1	0	1	2,429	30	0	0	3,173
PCB's	5,975	342	7	25	614	903	810	313	256	9,245
Oily Sludges	3,222	8,928	95	98	1,210	1,820	4,730	5,786	411	26,300
Halogenated Organic Sludges & Solids	34	2,448	0	0	1	14	430	0	1	2,928
Non-Halogenated Organic Sludges&Solids	2,479	8,103	24	28	387	1,670	15,870	9,942	130	38,633
Dye & Paint Sludges & Resins	2,757	223	42	2	141	1,097	2,160	131	50	6,603
Metal-containing Liquids	6,928	56,050	19	0	284	1,183	14,430	1,039	618	80,551
Cyanide & Metal Liquids	37	0	7	0	0	7	40	30	7	128
Non-Metallic Inorganic Liquids	2,905	5,540	5	0	1,499	1,058	8,710	107,099	7,681	134,497
Metal-containing Sludges	1,530	418	2	354	8	150	4,800	0	0	7,262
Non-Metallic Inorganic Sludges	661	49	0	0	1	1,519	1,200	672	21,008	25,110
Contaminated Soil	4,292	12,795	1,684	121	302	2,366	5,610	449	320	27,939
Miscellaneous	9,320	41,276	410	64	4,979	3,115	8,950	4,285	4,695	77,094
TOTALS	66,099	161,013	2,524	720	13,246	36,403	102,000	131,233	38,043	551,281

CURRENT REGIONAL NEEDS ASSESSMENT FOR COMMERCIAL HAZARDOUS WASTE
TREATMENT/DISPOSAL CAPACITY, IN TONS (DHS Table B)

Treatment Method	Alameda	C. Costa	Marin	Napa	S.F.	S.M.	S.C.	Solano	Sonoma	Region
Aqueous Treatment-Organic	19	705	1	0	9	2,429	30	0	0	3,193
Aqueous Treatment-Metals	10,045	66,830	31	354	1,783	2,244	23,270	108,167	8,300	221,024
Incineration	15,537	23,911	1,757	176	1,445	6,042	24,880	10,835	765	85,348
Solvent Recovery	7,684	2,449	119	14	471	11,289	14,080	155	1,950	38,211
Oil Recovery	19,757	27,990	149	108	2,271	8,235	15,930	7,050	1,270	82,760
Other Recycling	4,874	25,936	420	6	3,655	2,681	16,470	1,523	4,545	60,110
Stabilization	7,713	13,192	47	62	3,612	2,570	7,340	3,503	21,010	59,049
Totals	65,629	161,013	2,524	720	13,246	35,490	102,000	131,233	37,840	549,695

Treatment needs are based on manifested waste only.

COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL FACILITIES AND THEIR
CAPACITIES AND QUANTITIES OF WASTE TREATED OR DISPOSED OF
IN CURRENT YEAR, IN TONS (DHS Table C)

Capacities

Treatment Method	Alameda	Contra Costa	Marin	Napa	San Francisco
Aqueous Treatmt-Organic	0	19,893	0	0	0
Aqueous Treatmt-Metals	36,500	53,343	0	0	0
Incineration	0	3,387	0	0	0
Solvent Recovery	504	0	0	0	0
Oil Recovery	75,600	0	0	0	76,000
Other Recycling	0	43,000	0	0	0
Stabilization	0	0	0	0	0
Residuals	0	352,000	0	0	0
Totals	112,604	471,623	0	0	76,000

Waste Quantities Treated

Treatment Method	Alameda	Contra Costa	Marin	Napa	San Francisco
Aqueous Treatmt-Organic	0	19,893	0	0	0
Aqueous Treatmt-Metals	4,275	22,923	0	0	0
Incineration	0	3,363	0	0	0
Solvent Recovery	310	0	0	0	0
Oil Recovery	54,212	0	0	0	45,600
Other Recovery	0	27,191	0	0	0
Stabilization	0	0	0	0	0
Residuals	0	176,817	0	0	0
Totals	58,797	250,187	0	0	45,600

Capacity Used (%)

Treatment Method	Alameda	Contra Costa	Marin	Napa	San Francisco
Aqueous Treatmt-Organic	0	100.0	0	0	0
Aqueous Treatmt-Metals	11.7	43.0	0	0	0
Incineration	0	99.3	0	0	0
Solvent Recovery	61.5	0	0	0	0
Oil Recovery	70.9	0	0	0	60.0
Other Recycling	0	63.2	0	0	0
Stabilization	0	0	0	0	0
Residuals	0	0	0	0	0
Totals	51.8	53.0	0	0	60.0

COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL FACILITIES AND THEIR
CAPACITIES AND QUANTITIES OF WASTE TREATED OR DISPOSED OF
IN CURRENT YEAR, IN TONS (DHS Table C)

<i>Capacity</i> Treatment Method	San Mateo	Santa Clara	Solano	Sonoma	Region
Aqueous Treatmt-Organic	8,400	0	0	0	28,293
Aqueous Treatmt-Metals	0	20,870	0	0	110,713
Incineration	0	250	0	0	3,637
Solvent Recovery	50,400	26,460	0	0	77,364
Oil Recovery	25,200	0	0	0	176,800
Other Recycling	0	410	0	0	43,410
Stabilization	0	21,040	0	0	21,040
Residuals	0	0	166,784	0	518,784
Totals	84,000	69,030	166,784	0	980,941

<i>Wastes Quantities Treated</i> Treatment Method	San Mateo	Santa Clara	Solano	Sonoma	Region
Aqueous Treatmt-Organic	2,940	0	0	0	22,833
Aqueous Treatmt-Metals	0	4,431	0	0	31,629
Incineration	0	3	0	0	3,366
Solvent Recovery	18,480	4,167	0	0	22,957
Oil Recovery	0	0	0	0	124,625
Other Recycling	0	334	0	0	27,525
Stabilization	0	1,539	0	0	1,539
Residuals	0	0	66,430	0	243,551
Totals	21,420	10,474	66,430	0	478,025

<i>Capacity Used (%)</i> Treatment Method	San Mateo	Santa Clara	Solano	Sonoma	Region
Aqueous Treatmt-Organic	35.0	0	0	0	80.7%
Aqueous Treatmt-Metals	0	21.2	0	0	28.6%
Incineration	0	1.2	0	0	92.5%
Solvent Recovery	36.7	15.7	0	0	29.7%
Oil Recovery	98.5	0	0	0	70.1%
Other Recycling	0	81.5	0	0	63.4%
Stabilization	0	7.3	0	0	7.3%
Residuals	N/A	0	39.8	0	46.9%
Totals	36.4	15.2	39.8	0	48.7%

**CURRENT NEEDS ASSESSMENT FOR COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL
CAPACITY IN CURRENT YEAR, IN TONS (DHS Table D)**

<i>Required Capacities</i>						
Treatment Method	Alameda	Contra Costa	Marin	Napa	San Francisco	
Aqueous Treatmt-Organic	19	705	1	0	9	
Aqueous Treatmt-Metals	10,045	66,830	31	354	1,783	
Incineration	15,537	23,911	1,757	176	1,445	
Solvent Recovery	7,684	2,449	119	14	471	
Oil Recovery	19,757	27,990	149	108	2,271	
Other Recycling	4,874	25,936	420	6	3,655	
Stabilization	7,713	13,192	47	62	3,612	
Residuals	21,322	57,795	301	293	5,920	
Totals	86,951	218,808	2,825	1,013	19,166	

<i>Existing Treatment Capacity</i>						
Treatment Method	Alameda	Contra Costa	Marin	Napa	San Francisco	
Aqueous Treatmt-Organic	0	19,893	0	0	0	
Aqueous Treatmt-Metals	36,500	53,343	0	0	0	
Incineration	0	3,387	0	0	0	
Solvent Recovery	504	0	0	0	0	
Oil Recovery	75,600	0	0	0	76,000	
Other Recovery	0	43,000	0	0	0	
Stabilization	0	0	0	0	0	
Residuals	0	352,000	0	0	0	
Totals	112,604	471,623	0	0	76,000	

<i>Capacity Excess or Deficiency</i>						
Treatment Method	Alameda	Contra Costa	Marin	Napa	San Francisco	
Aqueous Treatmt-Organic	-19	+19,188	-1	0	-9	
Aqueous Treatmt-Metals	+26,455	-13,487	-31	-354	-1,783	
Incineration	-15,537	-20,524	-1,757	-176	-1,445	
Solvent Recovery	-7,180	-2,449	-119	-14	-471	
Oil Recovery	+55,843	-27,990	-149	-108	+73,729	
Other Recycling	-4,874	+17,064	-420	-6	-3,655	
Stabilization	-7,713	-13,192	-47	-62	-3,612	
Residuals	-21,321	+294,025	-301	-293	-5,919	
Totals	+25,653	+252,815	-2,825	-1,013	+56,834	

**CURRENT NEEDS ASSESSMENT FOR COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL
CAPACITY IN CURRENT YEAR, IN TONS (DHS Table D)**

<i>Required Capacities</i>					
Treatment Method	San Mateo	Santa Clara	Solano	Sonoma	Region
Aqueous Treatmt-Organic	2,429	30	0	0	3,193
Aqueous Treatmt-Metals	2,244	23,270	108,167	8,300	221,024
Incineration	6,042	24,880	10,835	765	85,348
Solvent Recovery	11,289	14,080	155	1,950	38,211
Oil Recovery	8,235	15,930	7,050	1,270	82,760
Other Recycling	2,681	16,470	1,523	4,545	60,110
Stabilization	2,570	7,340	3,503	21,010	59,049
Residuals	8,958	28,936	60,812	30,083	214,419
Totals	44,448	130,936	192,045	67,923	764,114
<i>Existing Treatment Capacity</i>					
Treatment Method	San Mateo	Santa Clara	Solano	Sonoma	Region
Aqueous Treatmt-Organic	8,400	0	0	0	28,293
Aqueous Treatmt-Metals	0	20,870	0	0	110,713
Incineration	0	250	0	0	3,637
Solvent Recovery	50,400	26,470	0	0	77,364
Oil Recovery	25,200	0	0	0	176,800
Other Recycling	0	410	0	0	43,410
Stabilization	0	21,040	0	0	21,040
Residuals	0	0	166,784	0	518,784
Totals	84,000	69,030	166,784	0	980,041
<i>Capacity Excess or Deficiency</i>					
Treatment Method	San Mateo	Santa Clara	Solano	Sonoma	Region
Aqueous Treatmt-Organic	+5,971	-30	0	0	+25,100
Aqueous Treatmt-Metals	-2,244	-2,400	-108,167	-8,300	-110,311
Incineration	-6,042	-24,630	-10,835	-765	-81,711
Solvent Recovery	+39,111	+12,380	-155	-1,950	+39,153
Oil Recovery	+16,965	-15,930	-7,050	-1,270	+94,040
Other Recycling	-2,681	-16,060	-1,523	-4,545	-16,700
Stabilization	-2,570	+13,700	-3,503	-21,010	-38,009
Residuals	-8,957	-28,936	+105,972	-30,082	+304,364
Totals	+39,552	-61,906	-25,261	-67,923	+215,927

**QUANTITIES OF HAZARDOUS WASTE IMPORTED INTO COUNTIES IN THE CURRENT YEAR,
IN TONS (DHS Table E)**

Waste Category	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	4,007	9,444	0	0	142	37,231	1,180	237	0	52,241
Halogenated Solvents	24	884	0	0	0	3,550	355	5	0	4,818
Non-halogenated Solvents	4	2,140	0	0	0	15,015	1,170	214	850	19,393
Organic Liquids	9	17,466	0	0	10	449	91	11	0	18,036
Pesticides	8	2,231	0	0	0	27	13	0	0	2,279
PCB's and Dioxins	2	42	0	0	0	1,569	60	179	0	1,852
Oily Sludges	0	4,532	0	0	21	26	231	1,337	0	6,147
Halogenated Organic Sludges & Solids	18	130	0	0	0	79	15	0	0	242
Non-halogenated Organic Sludges&Solids	21	3,790	0	0	123	565	87	2,043	0	6,629
Dye & Paint Sludges & Resins	0	3,199	0	0	1	191	125	312	0	3,828
Metal-containing Liquids	68	15,021	8	0	0	12	991	16,772	39	32,911
Cyanide & Metal Liquids	3	59	0	0	0	0	4	0	0	66
Non-Metallic Inorganic Liquids	1,354	117,384	0	0	0	113	558	85	0	119,494
Metal-containing Sludges	1	494	0	0	0	4	96	3,227	0	3,822
Non-Metallic Inorganic Sludges	0	13,265	0	0	0	1	15	12,655	0	25,936
Contaminated Soil	0	251	0	0	0	1	5	9,532	0	9,776
Miscellaneous Wastes	717	14,077	24	0	55	158	356	30,389	0	45,766
Totals	6,236	204,409	32	0	352	58,991	5,352	76,998	889	353,236

QUANTITIES OF HAZARDOUS WASTE EXPORTED FROM COUNTIES IN THE CURRENT YEAR,
IN TONS (DHS Table F)

Waste Category	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	10,912	13,835	N/A	0	1,060	3,252	N/A	834	N/A	N/A
Halogenated Solvents	916	460	N/A	7	9	571	N/A	15	N/A	N/A
Non-halogenated Solvents	5,461	969	N/A	73	462	9,183	N/A	139	N/A	N/A
Organic Liquids	1,775	902	N/A	0	2,287	362	N/A	70	N/A	N/A
Pesticides	8	705	N/A	0	1	1,070	N/A	0	N/A	N/A
PCB's and Dioxins	5,983	342	N/A	2	614	2,428	N/A	313	N/A	N/A
Oily Sludges	3,234	8,449	N/A	0	1,210	807	N/A	5,406	N/A	N/A
Halogenated Organic Sludges & Solids	17	2,448	N/A	0	1	1,777	N/A	0	N/A	N/A
Non-halogenated Organic Sludges&Solids	2,487	6,899	N/A	0	387	14	N/A	9,942	N/A	N/A
Dye and Paint Sludges & Resins	2,755	219	N/A	0	138	805	N/A	131	N/A	N/A
Metal-containing Liquids	6,885	24,225	N/A	0	284	1,076	N/A	1,039	N/A	N/A
Cyanide and Metal Liquids	37	0	N/A	0	0	7	N/A	30	N/A	N/A
Non-Metallic Inorganic Liquids	2,953	1,159	N/A	4	1,499	1,027	N/A	107,099	N/A	N/A
Metal-containing Sludges	1,537	374	N/A	0	8	11	N/A	0	N/A	N/A
Non-Metallic Inorganic Sludges	661	34	N/A	0	1	1,519	N/A	630	N/A	N/A
Contaminated Soil	4,364	12,787	N/A	0	302	2,007	N/A	357	N/A	N/A
Miscellaneous Wastes	8,560	36,298	N/A	0	4,980	2,845	N/A	3,725	N/A	N/A
Totals	58,545	110,105	N/A	86	13,243	28,761	N/A	129,730	N/A	N/A

COMMERCIAL HAZARDOUS WASTE STORAGE CAPACITY AND ACTIVITY IN THE CURRENT YEAR, IN TONS* (DHS Table G)

Average Monthly Quantity of Wastes in Storage for > 90 days		Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Container Tank	--	--	--	--	4,400gal	--	11	481	N/A	unknown	N/A
Waste Pile	1,099	--	--	--	--	601	1,218	90	N/A	unknown	N/A
Surface Impoundment	--	--	--	--	--	--	--	--	N/A	--	N/A
Other/Unknown	--	--	182	--	--	--	--	--	N/A	--	N/A
Totals	1,099	182	--	--	4,400gal	601	1,229	571	N/A	unknown	N/A
Storage Capacity	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region	
Container Tank	--	--	--	33,000gal	--	21	3,904	N/A	2,000gal	N/A	
Waste Pile	unknown	--	--	--	1,949	1,533	353	N/A	10,000gal	N/A	
Surface Impoundment	--	--	--	--	--	--	--	--	N/A	--	
Other/Unknown	--	666	--	--	--	--	--	--	N/A	--	
Totals	unknown	666	--	33,000gal	1,949	1,533	4,257	N/A	12,000gal	N/A	
% of Capacity Used	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region	
Container Tank	--	--	--	13.3	--	50.0	12.3	N/A	unknown	N/A	
Waste Pile	unknown	--	--	--	30.8	79.5	25.5	N/A	unknown	N/A	
Surface Impoundment	--	--	--	--	--	--	--	N/A	--	N/A	
Other	--	27.3	--	--	--	--	--	N/A	--	N/A	
Totals	unknown	27.3	--	13.3	30.8	79.1	13.4	N/A	unknown	N/A	

* (except as noted)

ON-SITE TREATMENT/DISPOSAL OF HAZARDOUS WASTE IN CURRENT YEAR,
IN TONS (DHS Table H)

Wastes Treated/Disposed of On-site	Alameda	C. C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	N/A	0	None	0	None	0	0	None	N/A	N/A
Aqueous Treatment-Metals	N/A	86,696	None	0	None	112,598	0	None	N/A	N/A
Incineration	N/A	86,053	None	unknown	None	0	0	None	N/A	N/A
Solvent Recovery	N/A	0	None	unknown	None	17	25	None	N/A	N/A
Oil Recovery	N/A	0	None	0	None	0	0	None	N/A	N/A
Other Recovery	N/A	26	None	0	None	6,000	0	None	N/A	N/A
Stabilization	N/A	0	None	0	None	256	0	None	N/A	N/A
Residuals	N/A	91,412	None	0	None	0	0	None	N/A	N/A
Totals	N/A	264,187	None	unknown	None	125,138	25	None	N/A	N/A

PLANNING ESTIMATE OF QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE BY GENERATORS
IN THE SAN FRANCISCO BAY REGION, IN TONS (DHS Table I-1)

MANIFESTED WASTES

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	16,535	19,062	54	10	1,061	7,211	11,200	1,263	864	57,260
Halogenated Solvents	1,014	460	11	4	9	694	2,280	15	181	4,668
Non-Halogenated Solvents	6,671	1,989	108	10	462	10,694	11,800	139	1,770	33,643
Organic Liquids	1,734	2,625	55	4	2,287	473	8,950	70	51	16,249
Pesticides	7	705	1	0	1	2,429	30	0	0	3,173
PCB's & Dioxins	5,975	342	7	25	614	903	810	313	256	9,245
Oily Sludges	3,222	8,928	95	98	1,210	1,820	4,730	5,786	411	26,300
Halogenated Organic Sludges & Solids	34	2,448	0	0	1	14	430	0	1	2,928
Non-Halogenated Organic Sludges&Solids	2,479	8,103	24	28	387	1,670	15,870	9,942	130	38,633
Dye and Paint Sludges & Resins	2,757	223	42	2	141	1,097	2,160	131	50	6,603
Metal-containing Liquids	6,928	56,050	19	0	284	1,183	14,430	1,039	618	80,551
Cyanide & Metal Liquids	37	0	7	0	0	7	40	30	7	128
Non-Metallic Inorganic Liquids	2,905	5,540	5	0	1,499	1,058	8,710	107,099	7,681	134,497
Metal-containing Sludges	1,530	418	2	354	8	31	4,800	0	0	7,143
Non-Metallic Inorganic Sludges	661	49	0	0	1	1,519	1,200	672	21,008	25,110
Contaminated Soil	4,292	12,795	1,684	121	302	2,366	5,610	363	320	27,853
Miscellaneous	9,320	41,276	410	64	4,979	3,115	8,950	4,285	4,695	77,094
Totals	66,101	161,013	2,524	720	13,246	36,284	102,000	131,147	38,043	551,078

PLANNING ESTIMATE OF QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE BY GENERATORS
IN THE SAN FRANCISCO BAY REGION, IN TONS (DHS Table I-2)

CLEANUP WASTES

Waste Category	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	0	0	0	0	309	115	0	7	0	431
Halogenated Solvents	0	0	0	0	1	0	0	0	0	1
Non-Halogenated Solvents	0	0	0	1	7	6	0	2	0	16
Organic Liquids	0	0	0	3	26	44	0	52	0	125
Pesticides	0	0	0	0	0	1	0	0	0	1
PCB's & Dioxins	0	0	0	15	237	903	0	0	0	1,155
Oil Sludges	0	0	0	2	195	58	0	47	0	302
Halogenated Organic Sludges & Solids	0	0	0	0	0	0	0	0	0	0
Non-Halogenated Organic Sludges&Solids	0	0	0	24	70	59	0	7,162	0	7,315
Dye and Paint Sludges & Resins	0	0	0	0	0	17	0	0	0	17
Metal-containing Liquids	0	0	0	0	0	19	0	0	0	19
Cyanide & Metal Liquids	0	0	0	0	0	0	0	0	0	0
Non-Metallic Inorganic Liquids	0	0	0	0	22	20	0	106,736	0	106,778
Metal-containing Sludges	0	0	0	0	0	0	0	0	0	0
Non-Metallic Inorganic Sludges	0	0	0	0	1	0	0	0	0	1
Contaminated Soil	0	39	0	121	302	2,366	5,397	363	0	8,588
Miscellaneous	0	0	0	62	3,672	507	1,115	471	0	5,827
Totals	0	39	0	228	4,842	4,115	6,512	114,840	0	130,576

PLANNING ESTIMATE OF QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE BY GENERATORS
IN THE SAN FRANCISCO BAY REGION, IN TONS (DHS Table I-3)

TRANSFER STATION WASTES

Waste Category	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	12,300	0	0	0	0	795	270	0	0	13,365
Halogenated Solvents	73	0	0	0	0	29	30	0	0	132
Non-Halogenated Solvents	2,225	0	0	0	0	70	457	0	1,703	4,455
Organic Liquids	0	0	0	0	0	5	24	0	0	29
Pesticides	0	0	0	0	0	0	0	0	0	0
PCB's & Dioxins	0	0	0	0	0	0	22	0	0	22
Oily Sludges	5	0	0	0	0	1	48	0	0	54
Halogenated Organic Sludges & Solids	0	0	0	0	0	0	0	0	0	0
Non-Halogenated Organic Sludges&Solids	0	0	0	0	0	7	18	0	0	25
Dye and Paint Sludges & Resins	0	0	0	0	0	1	22	0	0	23
Metal-containing Liquids	0	0	0	0	0	0	437	0	0	437
Cyanide & Metal Liquids	0	0	0	0	0	0	0	0	0	0
Non-Metallic Inorganic Liquids	0	0	0	0	0	4	1,386	0	0	1,390
Metal-containing Sludges	0	0	0	0	0	0	0	0	0	0
Non-Metallic Inorganic Sludges	0	0	0	0	0	0	14	0	0	14
Contaminated Soil	0	0	0	0	0	0	30	0	0	30
Miscellaneous	0	250	0	0	0	1	332	0	0	583
Totals	14,603	250	0	0	0	913	3,090	0	1,703	20,559

PLANNING ESTIMATE OF QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE BY GENERATORS
IN THE SAN FRANCISCO BAY REGION, IN TONS (DHS Table I-4)

SMALL QUANTITY GENERATOR WASTES

Waste Category	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	22,545	*	5,313	7,270	9,510	10,089	40,300	2,246	11,814	109,087
Halogenated Solvents	770	*	154	0	630	70	0	181	156	1,961
Non-Halogenated Solvents	770	*	154	482	558	547	1,846	170	156	4,683
Organic Liquids	1,614	*	177	95	84	38	130	34	1,267	3,439
Pesticides	160	*	58	365	71	14	306	40	100	1,114
PCB's & Dioxins	41	*	20	0	0	0	34	0	0	95
Oily Sludges	0	*	0	0	0	0	0	0	0	0
Halogenated Organic Sludges & Solids	13	*	2	0	0	1	99	0	4	119
Non-Halogenated Organic Sludges&Solids	233	*	26	54	331	119	142	91	4	1,000
Dye and Paint Sludges & Resins	308	*	55	205	309	43	338	103	117	1,478
Metal-containing Liquids	151	*	21	16	74	35	343	13	274	927
Cyanide & Metal Liquids	59	*	7	5	21	5	105	4	76	282
Non-Metallic Inorganic Liquids	1,479	*	124	140	369	98	2,653	95	331	5,289
Metal-containing Sludges	193	*	12	16	390	24	183	46	47	911
Non-Metallic Inorganic Sludges	0	*	0	5	0	0	0	0	0	5
Contaminated Soil	0	*	0	0	0	0	0	0	0	0
Miscellaneous	3,744	*	599	1,640	2,620	1,262	5,580	1,231	819	17,495
Totals	32,080	*	6,722	10,293	14,967	12,345	52,059	4,254	15,165	147,885

*: The industrial waste stream was not separated into manifested and small quantity generator wastes for this county.

PLANNING ESTIMATE OF QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE BY GENERATORS
IN THE SAN FRANCISCO BAY REGION, IN TONS (DHS Table I-5)

HOUSEHOLD WASTES

Waste Category	Alameda	C. Costa	Marin	Napa	S. F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Waste Oil	0	492	0	0	780	153	220	244	0	1,889
Halogenated Solvents	0	0	0	0	14	11	10	4	0	39
Non-Halogenated Solvents	0	214	0	54	124	763	20	47	0	1,222
Organic Liquids	0	0	0	0	69	4,146	10	22	0	4,247
Pesticides	0	0	0	23	54	579	80	19	0	755
PCB's & Dioxins	0	0	0	0	0	0	0	0	0	0
Oily Sludges	0	0	0	0	0	5	0	0	0	5
Halogenated Organic Sludges & Solids	0	0	0	0	0	0	0	0	0	0
Non-Halogenated Organic Sludges&Solids	0	0	0	0	82	0	70	28	0	180
Dye and Paint Sludges & Resins	0	310	0	162	513	21	300	174	0	1,480
Metal-containing Liquids	0	0	0	0	0	16	0	0	0	16
Cyanide & Metal Liquids	0	0	0	6	0	0	0	0	0	6
Non-Metallic Inorganic Liquids	0	0	0	6	166	368	230	61	0	831
Metal-containing Sludges	0	0	0	0	0	21	0	0	0	21
Non-Metallic Inorganic Sludges	0	0	0	0	0	5	0	0	0	5
Contaminated Soil	0	0	0	0	0	0	0	0	0	0
Miscellaneous	800	54	370	43	320	257	670	107	560	3,181
Totals	800	1,070	370	294	2,122	6,345	1,610	706	560	13,877

PLANNING ESTIMATE OF QUANTITIES OF HAZARDOUS WASTE SHIPPED OFF-SITE BY GENERATORS
IN THE SAN FRANCISCO BAY REGION, IN TONS (DHS Table I-6)

TOTALS FOR TABLE I

Waste Category	Alameda	C.C.	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	26,780	19,554	5,367	7,280	11,042	8,472	51,450	3,746	12,678	146,369
Halogenated Solvents	1,711	460	165	4	652	690	2,260	200	337	6,479
Non-Halogenated Solvents	5,216	2,203	262	545	1,137	11,490	13,209	354	223	34,639
Organic Liquids	3,348	2,625	232	96	2,414	4,578	9,066	74	1,318	23,751
Pesticides	167	705	59	388	126	3,010	416	59	100	5,030
PCB's & Dioxins	6,016	342	27	10	377	0	822	313	256	8,163
Oil Sludges	3,217	8,928	95	96	1,015	1,766	4,682	5,739	411	25,949
Halogenated Organic Sludges & Solids	47	2,448	2	0	1	14	529	0	5	3,046
Non-Halogenated Organic Sludges&Solids	2,712	8,103	50	58	730	1,628	16,064	2,899	134	32,378
Dye and Paint Sludges & Resins	3,065	533	97	369	963	1,109	2,776	408	167	9,487
Metal-containing Liquids	7,079	56,050	40	16	358	1,187	14,336	1,052	892	81,010
Cyanide & Metal Liquids	96	0	14	11	21	8	145	34	83	412
Non-Metallic Inorganic Liquids	4,384	5,540	129	146	2,012	1,422	10,207	519	8,012	32,371
Metal-containing Sludges	1,723	418	14	370	398	57	4,983	46	47	8,056
Non-Metallic Inorganic Sludges	661	49	0	5	0	1,524	1,186	672	21,008	25,105
Contaminated Soil	4,292	12,756	1,684	0	0	0	183	0	320	19,235
Miscellaneous	13,864	41,080	1,379	1,570	4,247	3,116	13,753	5,152	6,074	90,235
Totals	84,378	161,794	9,616	11,079	25,493	40,071	146,067	21,267	52,065	551,830

PROJECTED QUANTITIES OF CLEAN-UP WASTES (DHS Table L-1)

UNDERGROUND TANKS

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.M.	S.C.	Solano	Sonoma	Region
Waste Oil	0	0	0	0	N/E	2	0	N/E	0	2
Halogenated Solvents	0	0	0	10	N/E	0	0	N/E	0	10
Non-Halogenated Solvents	0	0	0	0	N/E	0	0	N/E	0	0
Organic Liquids	0	0	0	0	N/E	90	0	N/E	0	90
Pesticides	0	0	0	0	N/E	0	0	N/E	0	0
PCB's	0	0	0	0	N/E	0	0	N/E	0	0
Oily Sludges	0	0	0	0	N/E	0	0	N/E	0	0
Halogenated Organic Sludges & Solids	0	0	0	0	N/E	0	0	N/E	0	0
Non-Halogenated Organic Sludges&Solids	0	0	0	0	N/E	0	560	N/E	0	560
Dye & Paint Sludges & Resins	0	0	0	0	N/E	0	0	N/E	0	0
Metal-containing Liquids	0	0	0	0	N/E	0	0	N/E	0	0
Cyanide and Metal Liquids	0	0	0	0	N/E	0	0	N/E	0	0
Non-Metallic inorganic Liquids	0	0	0	0	N/E	0	140	N/E	0	140
Metal-containing Sludges	0	0	0	0	N/E	0	0	N/E	0	0
Non-Metallic Inorganic Sludges	0	0	0	0	N/E	0	0	N/E	0	0
Contaminated Soil	900	60	160	417	N/E	0	2,200	N/E	500	4,237
Miscellaneous	0	0	0	0	N/E	748	1,950	N/E	0	2,698
Totals	900	60	160	427	N/E	840	4,850	N/E	500	77,370

N/E: Not Estimated

PROJECTED QUANTITIES OF CLEAN-UP WASTES (DHS Table L-2)

OLD DISPOSAL SITES

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.M.	S.C.	Solano	Sonoma	Region
Waste Oil	0	N/A	0	0	N/E	0	0	N/E	0	0
Halogenated Solvents	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Halogenated Solvents	0	N/A	0	0	N/E	0	0	N/E	0	0
Organic Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Pesticides	0	N/A	0	0	N/E	0	0	N/E	0	0
PCB's	0	N/A	0	0	N/E	0	0	N/E	0	0
Oily Sludges	0	N/A	0	0	N/E	0	0	N/E	0	0
Halogenated Organic Sludges & Solids	0	N/A	0	10	N/E	0	0	N/E	0	10
Non-Halogenated Organic Sludges&Solids	0	N/A	0	0	N/E	0	0	N/E	0	0
Dye & Paint Sludges & Resins	0	N/A	0	0	N/E	0	0	N/E	0	0
Metal-containing Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Cyanide and Metal Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Metallic Inorganic Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Metal-containing Sludges	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Metallic Inorganic Sludges	0	N/A	0	0	N/E	0	0	N/E	0	0
Contaminated Soil	0	N/A	0	0	N/E	114	0	N/E	0	114
Miscellaneous	0	N/A	0	0	N/E	0	0	N/E	0	0
Totals	0	N/A	0	10	N/E	114	0	N/E	0	124

N/E: Not Estimated

PROJECTED QUANTITIES OF CLEAN-UP WASTES (DHS Table L-3)

CLOSED TOXIC PITS

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.M.	S.C.	Solano	Sonoma	Region
Waste Oil	0	N/A	0	0	N/E	0	0	N/E	0	0
Halogenated Solvents	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Halogenated Solvents	0	N/A	0	0	N/E	0	0	N/E	0	0
Organic Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Pesticides	0	N/A	0	0	N/E	0	0	N/E	0	0
PCB's	0	N/A	0	0	N/E	0	0	N/E	0	0
Oily Sludges	0	N/A	0	0	N/E	0	0	N/E	0	0
Halogenated Organic Sludges & Solids	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Halogenated Organic Sludges&Solids	0	N/A	0	0	N/E	0	0	N/E	0	0
Dye & Paint Sludges & Resins	0	N/A	0	0	N/E	0	0	N/E	0	0
Metal-containing Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Cyanide and Metal Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Metallic inorganic Liquids	0	N/A	0	0	N/E	0	0	N/E	0	0
Metal-containing Sludges	0	N/A	0	0	N/E	0	0	N/E	0	0
Non-Metallic Inorganic Sludges	0	N/A	0	0	N/E	0	0	N/E	0	0
Contaminated Soil	0	N/A	0	0	N/E	0	0	N/E	0	0
Miscellaneous	0	N/A	0	10	N/E	0	0	N/E	0	10
Totals	0	N/A	0	10	N/E	0	0	N/E	0	10

N/E: Not Estimated

PROJECTED QUANTITIES OF CLEAN-UP WASTES (DHS Table L-4)

OTHER CLEANUP WASTES

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.M.	S.C.	Solano	Sonoma	Region
Waste Oil	0	0	0	0	N/E	49	N/A	N/E	0	49
Halogenated Solvents	0	0	0	2	N/E	0	N/A	N/E	0	2
Non-Halogenated Solvents	0	0	0	0	N/E	9	N/A	N/E	0	9
Organic Liquids	0	0	0	5	N/E	55	N/A	N/E	0	60
Pesticides	0	0	0	0	N/E	2	N/A	N/E	0	2
PCB's	0	0	0	0	N/E	10	N/A	N/E	0	10
Oily Sludges	0	0	0	5	N/E	33	N/A	N/E	0	38
Halogenated Organic Sludges & Solids	0	0	0	0	N/E	0	N/A	N/E	0	0
Non-Halogenated Organic Sludges&Solids	0	0	0	1	N/E	65	N/A	N/E	0	66
Dye & Paint Sludges & Resins	0	0	0	5	N/E	26	N/A	N/E	0	31
Metal-containing Liquids	0	0	0	0	N/E	34	N/A	N/E	0	34
Cyanide and Metal Liquids	0	0	0	0	N/E	0	N/A	N/E	0	0
Non-Metallic inorganic Liquids	0	0	0	0	N/E	21	N/A	N/E	0	21
Metal-containing Sludges	0	0	0	40	N/E	0	N/A	N/E	0	40
Non-Metallic Inorganic Sludges	0	0	0	0	N/E	0	N/A	N/E	0	0
Contaminated Soil	0	3,160	0	10	N/E	213	N/A	N/E	0	3,383
Miscellaneous	0	0	0	5	N/E	317	N/A	N/E	0	322
Totals	0	3,160	0	73	N/E	834	N/A	N/E	0	4,067

PROJECTED QUANTITIES OF CLEAN-UP WASTES (DHS Table L-5)

TABLE L TOTAL

Waste Category	Alameda	C. Costa*	Marin	Napa	S.F.	S.M.	S.C.*	Solano	Sonoma	Region
Waste Oil	0	0	0	0	N/E	51	0	N/E	0	51
Halogenated Solvents	0	0	0	12	N/E	0	0	N/E	0	12
Non-Halogenated Solvents	0	0	0	0	N/E	10	0	N/E	0	10
Organic Liquids	0	0	0	5	N/E	145	0	N/E	0	150
Pesticides	0	0	0	0	N/E	2	0	N/E	0	2
PCB's	0	0	0	0	N/E	10	0	N/E	0	10
Oily Sludges	0	0	0	5	N/E	33	0	N/E	0	38
Halogenated Organic Sludges & Solids	0	0	0	10	N/E	0	0	N/E	0	10
Non-Halogenated Organic Sludges&Solids	0	0	0	1	N/E	65	560	N/E	0	626
Dye & Paint Sludges & Resins	0	0	0	5	N/E	26	0	N/E	0	31
Metal-containing Liquids	0	0	0	0	N/E	34	0	N/E	0	34
Cyanide and Metal Liquids	0	0	0	0	N/E	0	0	N/E	0	0
Non-Metallic Inorganic Liquids	0	0	0	0	N/E	21	140	N/E	0	161
Metal-containing Sludges	0	0	0	40	N/E	0	0	N/E	0	40
Non-Metallic Inorganic Sludges	0	0	0	0	N/E	0	0	N/E	0	0
Contaminated Soil	900	3,220	160	427	N/E	327	2,200	N/E	500	7,734
Miscellaneous	0	0	0	15	N/E	1,065	1,950	N/E	0	3,030
Totals	900	3,220	160	520	N/E	1,789	4,850	N/E	500	11,939

* non-applicable wastes are assumed to be zero for this county

PROJECTED QUANTITIES OF NEW HAZARDOUS WASTE STREAMS (DHS Table M-1)

ADDITIONAL PRETREATMENT SLUDGE

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Organic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Pesticides	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
PCB's	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Oily Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Halogenated Organic Sludges & Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Halogenated Organic Sludges&Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Dye & Paint Sludges & Resins	N/A	N/A	N/A	0	N/E	77	N/A	N/E	N/A	77
Metal-containing Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Cyanide and Metal Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Metallic Inorganic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Metal-containing Sludges	N/A	N/A	N/A	0	N/E	4	N/A	N/E	N/A	4
Non-Metallic Inorganic Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Contaminated Soil	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Miscellaneous	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Totals	N/A	N/A	N/A	0	N/E	81	N/A	N/E	N/A	81

PROJECTED QUANTITIES OF NEW HAZARDOUS WASTE STREAMS (DHS Table M-2)
OTHER NEW WASTES

Waste Category	Alameda	C. Costa	Marin	Napa	S. F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Waste Oil	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Non-Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Organic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Pesticides	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
PCB's	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Oil Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Halogenated Organic Sludges & Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Non-Halogenated Organic Sludges&Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Dye & Paint Sludges & Resins	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Metal-containing liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Cyanide and Metal Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Non-Metallic Inorganic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Metal-containing Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Non-Metallic Inorganic Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Contaminated Soil	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Miscellaneous	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0
Totals	N/A	N/A	N/A	0	N/E	0	N/A	N/A	N/E	0

N/E: Not Estimated

PROJECTED QUANTITIES OF NEW HAZARDOUS WASTE STREAMS (DHS Table M-3)

TOTALS

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Organic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Pesticides	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
PCB's	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Oily Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Halogenated Organic Sludges & Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Halogenated Organic Sludges&Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Dye & Paint Sludges & Resins	N/A	N/A	N/A	0	N/E	77	N/A	N/E	N/A	77
Metal-containing Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Cyanide and Metal Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Metallic Inorganic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Metal-containing Sludges	N/A	N/A	N/A	0	N/E	4	N/A	N/E	N/A	4
Non-Metallic Inorganic Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Contaminated Soil	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Miscellaneous	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Totals	N/A	N/A	N/A	0	N/E	81	N/A	N/E	N/A	81

N/E: Not Estimated

TOTAL PROJECTED QUANTITIES OF HAZARDOUS WASTE GENERATION (DHS Table N-1)
PROJECTED INDUSTRIAL WASTE

Waste Category	Alameda	C. Costa	Marin	Napa	S. F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	59,213	29,747	9,407	9,498	16,005	7,803	68,842	7,714	24,370	232,599
Halogenated Solvents	2,757	629	323	6	1,020	895	4,080	408	518	10,636
Non-Halogenated Solvents	12,719	2,225	422	640	1,634	17,045	24,511	618	701	60,515
Organic Liquids	4,552	3,892	256	125	3,633	539	18,892	92	1,611	33,592
Pesticides	211	1,134	161	476	84	3,882	370	53	129	6,500
PCB's & Dioxins	8,368	554	41	13	483	0	914	368	382	11,123
Oily Sludges	4,571	12,678	85	126	1,513	2,687	7,570	14,992	707	44,929
Halogenated Organic Sludges & Solids	82	3,937	4	0	1	22	690	0	8	4,744
Non-Halogenated Organic Sludges&Solids	3,996	11,558	72	75	964	1,770	4,003	7,394	164	29,996
Dye and Paint Sludges & Resins	4,278	742	138	270	581	1,726	2,412	500	338	10,985
Metal-containing Liquids	10,698	15,598	65	21	580	2,042	21,224	2,616	1,812	54,656
Cyanide & Metal Liquids	135	0	35	6	42	8	194	45	157	622
Non-Metallic Inorganic Liquids	7,834	8,711	256	183	2,602	1,202	16,819	959	891	39,457
Metal-containing Sludges	2,470	953	31	483	634	37	7,627	102	84	12,421
Non-Metallic Inorganic Sludges	808	108	0	7	0	2,680	1,700	1,717	457	7,477
Contaminated Soil	0	20,127	0	0	0	0	0	0	0	20,127
Miscellaneous	13,849	68,004	1,445	2,142	5,183	3,025	19,172	11,893	2,781	127,117
Totals	136,541	180,220	12,741	14,071	34,959	45,363	199,020	49,471	35,110	707,496

TOTAL PROJECTED QUANTITIES OF HAZARDOUS WASTE GENERATION (DHS Table N-2)

PROJECTED CLEAN-UP WASTE

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	0	0	0	0	N/E	51	0	N/E	0	51
Halogenated Solvents	0	0	0	12	N/E	0	0	N/E	0	12
Non-Halogenated Solvents	0	0	0	0	N/E	9	0	N/E	0	9
Organic Liquids	0	0	0	5	N/E	145	0	N/E	0	150
Pesticides	0	0	0	0	N/E	2	0	N/E	0	2
PCB's & Dioxins	0	0	0	0	N/E	10	0	N/E	0	10
Oily Sludges	0	0	0	5	N/E	33	0	N/E	0	38
Halogenated Organic Sludges & Solids	0	0	0	10	N/E	0	0	N/E	0	10
Non-Halogenated Organic Sludges&Solids	0	0	0	1	N/E	65	560	N/E	0	626
Dye and Paint Sludges & Resins	0	0	0	5	N/E	26	0	N/E	0	31
Metal-containing Liquids	0	0	0	0	N/E	34	0	N/E	0	34
Cyanide & Metal Liquids	0	0	0	0	N/E	0	0	N/E	0	0
Non-Metallic Inorganic Liquids	0	0	0	0	N/E	21	140	N/E	0	161
Metal-containing Sludges	0	0	0	40	N/E	0	0	N/E	0	40
Non-Metallic Inorganic Sludges	0	0	0	0	N/E	0	0	N/E	0	0
Contaminated Soil	900	3,220	160	427	N/E	327	2,200	N/E	500	7,734
Miscellaneous	0	0	0	15	N/E	1,065	1,950	N/E	0	3,030
Totals	900	3,220	160	520	N/E	1,788	4,850	N/E	500	11,938

N/E: not estimated

TOTAL PROJECTED QUANTITIES OF HAZARDOUS WASTE GENERATION (DHS Table N-3)
PROJECTED NEW WASTES

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Halogenated Solvents	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Organic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Pesticides	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
PCB's & Dioxins	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Oil Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Halogenated Organic Sludges & Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Halogenated Organic Sludges&Solids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Dye and Paint Sludges & Resins	N/A	N/A	N/A	0	N/E	77	N/A	N/E	N/A	77
Metal-containing Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Cyanide & Metal. Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Non-Metallic Inorganic Liquids	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Metal-containing Sludges	N/A	N/A	N/A	0	N/E	4	N/A	N/E	N/A	4
Non-Metallic Inorganic Sludges	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Contaminated Soil	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Miscellaneous	N/A	N/A	N/A	0	N/E	0	N/A	N/E	N/A	0
Totals	N/A	N/A	N/A	0	N/E	81	N/A	N/E	N/A	81

N/E: Not Estimated

TOTAL PROJECTED QUANTITIES OF HAZARDOUS WASTE GENERATION (DHS Table N-4)

PROJECTED HOUSEHOLD WASTE

Waste Category	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	0	599	0	0	944	171	270	409	0	2,393
Halogenated Solvents	0	0	0	0	16	12	10	8	0	46
Non-Halogenated Solvents	0	260	0	62	151	855	30	78	0	1,436
Organic Liquids	0	0	0	0	83	4,649	20	36	0	4,788
Pesticides	0	0	0	26	65	649	90	32	0	862
PCB's & Dioxins	0	0	0	0	0	0	0	0	0	0
Oil Sludges	0	0	0	0	0	6	0	0	0	6
Halogenated Organic Sludges & Solids	0	0	0	0	0	0	0	0	0	0
Non-Halogenated Organic Sludges&Solids	0	0	0	0	100	0	90	46	0	236
Dye and Paint Sludges & Resins	0	377	0	187	621	24	370	292	0	1,871
Metal-containing Liquids	0	0	0	0	0	18	0	0	0	18
Cyanide & Metal Liquids	0	0	0	7	0	0	0	0	0	7
Non-Metallic Inorganic Liquids	0	0	0	6	201	413	280	102	0	1,002
Metal-containing Sludges	0	0	0	0	0	24	0	0	0	24
Non-Metallic Inorganic Sludges	0	0	0	0	0	6	0	0	0	6
Contaminated Soil	0	0	0	0	387	0	0	179	0	566
Miscellaneous	2,097	65	390	49	0	288	820	0	662	4,371
Totals	2,097	1,301	390	337	2,568	7,115	1,980	1,182	662	17,632

TOTAL PROJECTED QUANTITIES OF HAZARDOUS WASTE GENERATION (DHS Table N-5)

TOTAL PROJECTED WASTES

Waste Category	Alameda	C. Costa	Marin	Napa	S. F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Waste Oil	59,213	30,346	9,407	9,498	16,949	8,025	69,112	8,123	24,370	235,043
Halogenated Solvents	2,757	629	323	18	1,036	907	4,090	416	518	10,694
Non-Halogenated Solvents	12,719	2,485	422	702	1,785	17,909	24,541	696	701	61,960
Organic Liquids	4,552	3,892	256	130	3,716	5,333	18,912	128	1,611	38,530
Pesticides	211	1,134	161	502	149	4,533	460	85	129	7,364
PCB's & Dioxins	8,368	554	41	13	483	10	914	368	382	11,133
Oily Sludges	4,571	12,678	85	131	1,513	2,726	7,570	14,992	707	44,973
Halogenated Organic Sludges & Solids	82	3,937	4	10	1	22	690	0	8	4,754
Non-Halogenated Organic Sludges&Solids	3,996	11,558	72	76	1,064	1,835	4,653	7,440	164	30,858
Dye and Paint Sludges & Resins	4,278	742	138	462	1,202	1,853	2,782	792	338	12,587
Metal-containing Liquids	10,698	15,598	65	21	580	2,094	21,224	2,616	1,812	54,708
Cyanide & Metal Liquids	135	0	35	13	42	8	194	45	157	629
Non-Metallic Inorganic Liquids	7,834	8,711	256	189	2,803	1,636	17,239	1,061	891	40,620
Metal-containing Sludges	2,470	953	31	523	634	65	7,627	102	84	12,489
Non-Metallic Inorganic Sludges	808	108	0	7	0	2,686	1,700	1,717	457	7,483
Contaminated Soil	900	23,347	160	427	0	327	2,200	0	500	27,861
Miscellaneous	15,946	68,069	1,835	2,356	5,570	4,378	21,942	12,072	3,443	135,611
Totals	139,538	184,741	13,291	14,928	37,527	54,347	205,850	50,653	36,272	737,147

PROJECTED COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL CAPACITIES (DHS Table 0-1)
CAPACITY FROM EXISTING FACILITIES

Treatment Method	Alameda	C. Costa	Marin	Napa	S.F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	0	19,893	0	0	0	8,400	0	0	0	28,293
Aqueous Treatment-Metals	36,500	53,343	0	0	0	0	20,870	0	0	110,713
Incineration	0	3,387	0	0	0	0	250	0	0	3,637
Solvent Recovery	504	0	0	0	0	50,400	26,460	0	0	77,364
Oil Recovery	75,600	0	0	0	76,000	25,200	0	0	0	176,800
Other Recycling	0	43,000	0	0	0	0	410	0	0	43,410
Stabilization	0	0	0	0	0	0	21,040	0	0	21,040
Residuals	0	352,000	0	0	0	0	0	166,784	0	518,784
Totals	112,604	471,623	0	0	76,000	84,000	69,030	166,784	0	980,941

6/20/88

PROJECTED COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL CAPACITIES (DHS Table 0-2)

CAPACITY FROM PROPOSED FACILITIES

Treatment Method	Alameda	C.Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	N/A	0	N/A	0	0	0	0	0	N/A	0
Aqueous Treatment-Metals	N/A	11,850	N/A	0	0	0	6,200	0	N/A	18,050
Incineration	N/A	142,000	N/A	0	0	0	0	0	N/A	142,000
Solvent Recovery	N/A	2,850	N/A	0	0	10,080	0	0	N/A	12,930
Oil Recovery	N/A	8,600	N/A	0	0	0	0	0	N/A	8,600
Other Recycling	N/A	6,700	N/A	0	0	0	0	0	N/A	6,700
Stabilization	N/A	0	N/A	0	0	0	0	0	N/A	0
Residuals	N/A	0	N/A	0	0	0	0	0	N/A	0
Totals	N/A	172,000	N/A	0	0	10,080	6,200	0	N/A	188,280

PROJECTED COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL CAPACITIES (DHS Table 0-3)
LOSS OF CAPACITY FROM CLOSING FACILITIES

Treatment Method	Alameda	C. Costa	Marin	Napa	S.F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	0	19,893	0	0	0	0	0	0	0	19,893
Aqueous Treatment-Metals	0	53,343	0	0	0	0	0	0	0	53,343
Incineration	0	3,387	0	0	0	0	0	0	0	3,387
Solvent Recovery	0	0	0	0	0	0	0	0	0	0
Oil Recovery	0	0	0	0	0	25,200	0	0	0	25,200
Other Recycling	0	43,000	0	0	0	0	0	0	0	43,000
Stabilization	0	0	0	0	0	0	0	0	0	0
Residuals	0	352,000	0	0	0	0	0	166,784	0	518,784
Totals	0	471,623	0	0	0	25,200	0	166,784	0	663,607

6/20/88

PROJECTED COMMERCIAL HAZARDOUS WASTE TREATMENT/DISPOSAL CAPACITIES (DHS Table 0-4)

TOTAL PROJECTED TREATMENT CAPACITIES BY COUNTY

Treatment Method	Alameda	C.Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	0	0	0	0	0	8,400	0	0	0	8,400
Aqueous Treatment-Metals	36,500	11,850	0	0	0	0	27,070	0	0	75,420
Incineration	0	142,000	0	0	0	0	250	0	0	142,250
Solvent Recovery	504	2,850	0	0	0	60,480	26,460	0	0	90,294
Oil Recovery	75,600	8,600	0	0	76,000	0	0	0	0	160,200
Other Recycling	0	6,700	0	0	0	0	410	0	0	7,110
Stabilization	0	0	0	0	0	0	21,040	0	0	21,040
Residuals	0	0	0	0	0	0	0	0	0	0
Totals	112,604	172,000	0	0	76,000	68,880	75,230	0	0	504,714

PROJECTED COUNTY NEEDS ASSESSMENT FOR COMMERCIAL HAZARDOUS
WASTE TREATMENT FACILITIES (DHS Table P-1)

PROJECTED COUNTY CAPACITY REQUIREMENT

Treatment Method	Alameda	C. Costa	Marin	Napa	S. F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	1,678	1,153	69	502	206	4,533	460	97	45	8,743
Aqueous Treatment-Metals	10,833	33,078	279	564	3,425	3,738	38,790	3,721	2,470	96,898
Incineration	34,053	39,761	2,250	988	2,749	4,047	11,240	8,600	6,200	109,888
Solvent Recovery	15,476	3,114	705	720	2,821	18,816	28,630	1,112	1,110	72,504
Oil Recovery	59,212	43,024	8,655	9,629	18,462	10,751	76,680	23,114	22,570	272,097
Other Recycling	0	50,954	0	2,336	9,161	8,853	37,340	5,871	0	114,515
Stabilization	26,806	13,657	689	189	702	3,609	12,620	8,137	2,260	68,669
Totals	148,058	184,741	12,647	14,928	37,526	54,347	205,760	50,652	34,655	743,314

Notes:

- 1) These projected treatment requirements are based on the assumption that no waste reduction techniques will be implemented for the rest of the century, and that current waste practices will continue through this period.
- 2) Alameda, Contra Costa, and Santa Clara County data were obtained in a one page table presented to ABAG in June, 1988. These figures are considered more current and more accurate than those contained in the county plans.
- 3) Alameda County, Marin County, and Sonoma County figures were computed using a different method than that suggested by the Department of Health Services, and do not agree with the waste totals in Table N-5; for Marin and Sonoma, the miscellaneous waste category was not broken into treatment methods.
- 4) San Francisco County figures had to be calculated from a 10% reduction scenario, by the following means:

$$[(\text{Industrial waste} - \text{Household waste for a given treatment}) / 0.9] + \text{Household waste for that treatment}.$$

PROJECTED COUNTY NEEDS ASSESSMENT FOR COMMERCIAL HAZARDOUS
WASTE TREATMENT FACILITIES (DHS Table P-2)

PROJECTED COUNTY CAPACITY

Treatment Method	Alameda	C. Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	0	0	0	0	0	8,400	0	0	0	8,400
Aqueous Treatment-Metals	36,500	11,850	0	0	0	0	27,070	0	0	75,420
Incineration	0	142,000	0	0	0	0	250	0	0	142,250
Solvent Recovery	504	2,850	0	0	0	60,480	26,460	0	0	90,294
Oil Recovery	75,600	8,600	0	0	76,000	0	0	0	0	160,200
Other Recycling	0	6,700	0	0	0	0	410	0	0	7,110
Stabilization	0	0	0	0	0	0	21,040	0	0	21,040
Totals	112,604	172,000	0	0	76,000	68,880	75,230	0	0	504,714

PROJECTED COUNTY NEEDS ASSESSMENT FOR COMMERCIAL HAZARDOUS
WASTE TREATMENT FACILITIES (DHS Table P-3)

PROJECTED CAPACITY EXCESS OR DEFICIENCY

Treatment Method	Alameda	C.Costa	Marin	Napa	S.F.	S.Mateo	S.Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	-1,678	-1,153	-69	-502	-206	+3,867	-460	-97	-45	-343
Aqueous Treatment-Metals	+25,667	-21,228	-279	-564	-3,425	-3,738	-11,720	-3,721	-2,470	-21,478
Incineration	-34,053	+102,239	-2,250	-988	-2,749	-4,047	-10,990	-8,600	-6,200	+32,362
Solvent Recovery	-14,972	-264	-705	-720	-2,821	+41,664	-2,170	-1,112	-1,110	+17,790
Oil Recovery	+16,388	-34,424	-8,655	-9,629	+57,538	-10,751	-76,680	-23,114	-22,570	-111,897
Other Recycling	0	-2,254	0	-2,336	-9,161	-8,853	-36,930	-5,871	0	-65,405
Stabilization	-26,806	-13,657	-689	-189	-702	-3,609	+8,420	-8,137	-2,260	-47,629
Totals	-35,454	+29,259	-12,647	-14,928	+38,474	+14,533	-130,530	-50,652	-34,655	-196,600

PROJECTED QUANTITIES OF RESIDUALS GENERATION (DOHS Table Q-1)
PROJECTED CAPACITY REQUIREMENT

Treatment Method	Alameda	C. Costa	Marin	Napa	S. F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	1,678	1,153	69	502	206	4,533	460	97	45	8,743
Aqueous Treatment-Metals	10,833	33,078	279	564	3,425	3,738	38,790	3,721	2,470	96,898
Incineration	34,053	39,761	2,250	988	2,749	4,047	11,240	8,600	6,200	109,888
Solvent Recovery	15,476	3,114	705	720	2,821	18,816	28,630	1,112	1,110	72,504
Oil Recovery	59,212	43,024	8,655	9,629	18,462	10,751	76,680	23,114	22,570	272,097
Other Recycling	0	50,954	0	2,335	9,161	8,853	37,340	5,871	0	114,515
Stabilization	26,806	13,657	689	189	702	3,609	12,620	8,137	2,260	68,669
Residuals*	56,094	46,246	3,070	2,728	16,268	12,971	56,771	23,211	9,308	226,667
Totals	182,906	230,987	15,717	17,655	53,794	67,318	262,530	73,863	43,963	969,981

Notes:

- 1) See Table P-1 for sources for Alameda, Contra Costa, and Santa Clara county data.
- 2) Also see Table P-1 for calculations on San Francisco County data.
- 3) Some miscellaneous wastes are not incorporated into treatment totals for Marin and Sonoma Counties.
- 4) Residue Generation Multipliers as suggested by DHS in the Technical Reference Manual were used by all counties except that for the method of "Other Recycling". In this case, San Francisco and Solano Counties used a residuals factor of 100% (probably too high), while all other counties used 0% (probably too low). A consistent factor within this range would be more appropriate.
- 5) Alameda County submitted a much lower, and less realistic, number for their residuals total than that shown above; the figure used in this table was calculated using DHS guidelines, and the breakdown is given in Table Q-2.

PROJECTED QUANTITIES OF RESIDUALS GENERATION (DOHS Table Q-2)
PROJECTED QUANTITY OF RESIDUALS

Treatment Method	Alameda	C. Costa	Marin	Napa	S. F.	S. Mateo	S. Clara	Solano	Sonoma	Region
Aqueous Treatment-Organic	168	115	7	50	21	453	46	10	5	874
Aqueous Treatment-Metals	5,417	16,539	139	282	1,712	1,869	19,395	1,861	1,235	48,449
Incineration	3,405	3,976	225	99	275	405	1,124	860	620	10,989
Solvent Recovery	3,095	623	141	144	564	3,763	5,726	222	222	14,501
Oil Recovery	11,842	8,605	1,731	1,926	3,692	2,150	15,336	4,623	4,514	54,419
Other Recycling	0	0	0	0	9,161	0	0	5,871	0	15,032
Stabilization	32,167	16,388	827	227	842	4,331	15,144	9,764	2,712	82,403
Residuals	56,094	46,246	3,070	2,728	16,268	12,971	56,771	23,211	9,308	226,667

Note:

1) All residuals were calculated based on the DHS Guidelines; only Alameda and S. F. County figures differed significantly from that which was presented as county data.

REFERENCES

The following are page numbers from each county plan corresponding to each table or to relevant data for that table.

Table	Alameda	Contra Costa	Marin	Napa	S. F.	San Mateo	Santa Clara	Solano	Sonoma
A	3-14,C-A	3-3,4	3-6,C-A	F-1,2	2-17,18	7-2	tbl A	2-13,14	B-4,3-11
B	C-A	3-3,4	3-12	F-3	5-6	7.10,7.36	tbl B	5-26?	B-B
C	C-C	3-3,4	C-C	F-4	5-8	7.28	tbl C	5-27	B-C
D	C-A	3-3,4	3-12,C-C	F-5	5-8	7.36,7.37	tbl D	5-27	B-D
E	C-E	3-13	C-E	F-6	4-32,33	7.15	tbl E	5-3..9	B-E
F	C-F	3-6	C-F	F-7	4-36..41	7.12	--	5-14..18	B-F
G	C-G	4-17	C-G	F-8	5-9	7.29	tbl G	5-1	5-2
H	C-H	4-20	3-23,C-H	F-12	2-58	7.32	tbl H	2-43	B-H
I	C-I,3-14 HH & SQG 3-24	3-3 3-16	C-I 3-16	3-6,F-13 4-7,E-6	2-73 2-23,39,56	7.11 7.11	tbl A --	2-52 2-20,29,40	B-I 3-13
J	n o t	i n c l u d e d	i n c l u d e d	i n c l u d e d	i n c l u d e d	s u m m a r y			
K	n o t	i n c l u d e d	i n c l u d e d	i n c l u d e d	i n c l u d e d	s u m m a r y			
L	C-L	3-21	C-L	F-17	--	8.6	tbl L	--	B-L
M	C-M	--	C-M	F-19	2-102	8.8	--	3-13	B-M
N	7-13,C-N HH & SQG 7-7,8	3-25,7-3 3-24	C-N 4-7	4-5,F-20 4-9	2-103 2-100	8.4 8.5	tbl N --	3-13 3-9,14	B-N 4-9,10
O	C-0	7-8,7-10	C-0	5-3,F-21	5-11	8.24	tbl O	5-29	B-O
P	*	7-3,7-8,*	C-P	3-7,5-3,*	5-12	8.29	tbl P,*	5-30,*	B-P
Q	*	7-3,8,10,*	C-Q	F-23,*	5-12	8.31	tbl Q,*	5-31,*	B-Q

*: from charts received directly from counties

APPENDIX 8

REGIONAL HAZARDOUS WASTE MANAGEMENT PLAN
NOTICE OF PREPARATION FOR EIR (INITIAL STUDY)



ASSOCIATION OF BAY AREA GOVERNMENTS

Mailing Address: ■ P.O. Box 2050 ■ Oakland, CA 94604-2050

To: Responsible Agencies and Other Interested Parties

From: Association of Bay Area Governments

Re: Notice of Preparation of an Environmental Impact Report for the Regional Hazardous Waste Management Plan for the San Francisco Bay Area

The Association of Bay Area Governments will be the lead agency in preparing a focused Environmental Impact Report for the project known as:

Project: San Francisco Bay Area Regional Hazardous Waste Management Plan prepared pursuant to AB-2948, Tanner.

Region: The San Francisco Bay Area including the counties of: Alameda, Contra Costa, Napa, Solano, Sonoma, Marin, San Francisco, San Mateo and Santa Clara.

The EIR will focus on the following:

Air Quality, Risk of Upset, Transportation, Public Services, Human Health,
Water Quality and Land Use.

This letter is a request for comments on the scope and content of the Environmental Impact Report. Detailed information may be included in your response. For your information, Attachment I contains a detailed project description and list of alternatives; whereas Attachment II contains the Initial Study. Attachment III lists the members of the Hazardous Waste Task Force. Attachment IV discusses source reduction and waste minimization strategies that do not require off-site facilities. Attachment V describes the characteristics of the major types of hazardous waste facilities.

Please submit your written comments at the earliest possible date, but no later than April 30, 1988. Comments should be sent to:

Regional Hazardous Waste Management Plan
Association of Bay Area Governments
P.O. Box 2050
Oakland, CA 94604-2050

The ABAG contacts for questions and information are: Emy Chan Meiorin (464-7941) or Suzanne Larson (464-7977).

Attachments

Representing City and County Governments of the San Francisco Bay Area

Joseph P. Bort MetroCenter ■ Eighth & Oak Streets ■ Oakland ■ (415) 464-7900 ■ Fax: (415) 464-7979

ATTACHMENT I

PROJECT DESCRIPTION SAN FRANCISCO BAY AREA REGIONAL HAZARDOUS WASTE MANAGEMENT PLAN

APPLICANT

The Association of Bay Area Governments (ABAG) is the applicant. ABAG has been designated by the State Department of Health Services as the responsible agency for the preparation of the San Francisco Regional Hazardous Waste Management Plan (RHWMP). The RHWMP is being prepared in coordination with the Hazardous Waste Task Force which is comprised of representatives of each of the nine Bay Area counties environmental, industrial, and public interest groups (see Attachment III).

PROJECT DESCRIPTION

ABAG is preparing a Regional Hazardous Waste Management Plan (RHWMP) pursuant to AB-2948 (Tanner). This Plan integrates the nine hazardous waste management plans currently under preparation by the Bay Area counties of: Alameda, Contra Costa, Napa, Solano, Sonoma, Marin, San Francisco, San Mateo and Santa Clara. The purpose of the RHWMP is to develop a comprehensive hazardous waste management system to protect public health, safety and welfare while maintaining the economic viability of the region.

The State legislation and guidelines require the Regional Plan to include the following:

1. Analysis of the existing and projected year 2000 hazardous waste stream in the Region,
2. Inventory of existing hazardous waste facilities and their current capacity,
3. Analysis of the potential for recycling hazardous waste and/or reducing the volume and the hazard of the waste at the source of generation, and a recommended plan for the Region,
4. Determination of the need for additional or expanded facilities and siting criteria to safely manage and properly dispose of hazardous wastes that will be generated through the year 2000,
5. Identification of regional issues, problems and solutions.

Two alternatives to the project are proposed for analysis in the focused EIR. The main features of these two alternative scenarios are:

1. No project, the existing facilities would be used, to the extent feasible, to dispose of hazardous waste generated in the region through the year 2000 (subject to implementation of State and Federal laws regarding the phaseout of land disposal of hazardous wastes); and
2. Development of policies and programs that encourage waste minimization, including on-site source reduction, recycling and treatment (as in the no project alternative, existing facilities would still be used— subject to implementation of State and Federal laws, with no development of new, or expanded off-site facilities).

ATTACHMENT II INITIAL ENVIRONMENTAL STUDY

I. Background

1. Name of Proponent: **Association of Bay Area Governments**
2. Address and Phone Number: **P.O. Box 2050
Oakland, California 94604-2050
(415) 464-7900**
3. Date Checklist Submitted: **March 23, 1988**
4. Agency Requiring Checklist:
5. Name of Proposal, if applicable: **Regional Hazardous Waste Management
Plan for the San Francisco Bay Area**

II. Environmental Impacts

(Explanations of all "yes" and "maybe" answers are required on attached sheets.)

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
1. Earth. Will the proposal result in:			
a. Unstable earth conditions or changes in geologic substructures?	_____	_____	<u>X</u>
b. Disruptions, displacements, compaction or overcovering of the soil?	_____	_____	<u>X</u>
c. Change in topography or ground surface relief features?	_____	_____	<u>X</u>
d. The destruction, covering or modification of any unique geologic or physical features	_____	_____	<u>X</u>
e. Any increase in wind or water erosion of soils, either on or off the site?	_____	_____	<u>X</u>
f. Changes in deposition or erosion of beach sands, or changes in siltation, deposition or erosion which may modify the channel of a river or stream or the bed of the ocean or any bay, inlet or lake?	_____	_____	<u>X</u>
g. Exposure of people or property to geologic hazards such as earthquakes, landslides, mudslides, ground failure, or similar hazards?	_____	_____	<u>X</u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
2. Air. Will the proposal result in:			
a. Substantial air emissions or deterioration of ambient air quality?	_____	<u>A</u>	_____
b. The creation of objectionable odors?	_____	<u>B</u>	_____
c. Alteration of air movement, moisture, or temperature, or any change in climate, either locally or regionally?	_____	_____	<u>X</u>
3. Water. Will the proposal result in:			
a. Changes in currents, or the course of direction of water movements, in either marine or fresh waters?	_____	_____	<u>X</u>
b. Changes in absorption rates, drainage patterns, or the rate and amount of surface runoff?	_____	_____	<u>X</u>
c. Alterations to the course or low of flood waters?	_____	_____	<u>X</u>
d. Change in the amount of surface water in any water body?	_____	_____	<u>X</u>
e. Discharge into surface waters, or in any alteration of surface water quality, including, but not limited to temperature, dissolved oxygen or turbidity?	_____	<u>C</u>	_____
f. Alteration of the direction or rate of flow of ground waters?	_____	_____	<u>X</u>
g. Change in the quantity of ground waters, either through direct additions or withdrawals, or through interception of an aquifer by cuts or excavations?	_____	_____	<u>X</u>
h. Substantial reduction in the amount of water otherwise available for public water supplies?	_____	_____	<u>X</u>
i. Exposure of people or property to water related hazards such as flooding or tidal waves?	_____	_____	<u>X</u>
4. Plant Life. Will the proposal result in:			
a. Change in the diversity of species, or number of any species of plants (including trees, shrubs, grass, crops, and aquatic plants)?	_____	_____	<u>X</u>
b. Reduction of the numbers of any unique, rare or endangered species of plants?	_____	_____	<u>X</u>
c. Introduction of new species of plants into an area, or in a barrier to the normal replenishment of existing species?	_____	_____	<u>X</u>
d. Reduction in acreage of any agricultural crop?	_____	_____	<u>X</u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
5. Animal Life. Will the proposal result in:			
a. Change in the diversity of species, or numbers of any species of animals (birds, land animals including reptiles, fish and shellfish, benthic organisms or insects)?	_____	_____	<u>X</u>
b. Reduction of the numbers of any unique, rare or endangered species of animals?	_____	_____	<u>X</u>
c. Introduction of new species of animals into an area, or result in a barrier to the migration or movement of animals?	_____	_____	<u>X</u>
d. Deterioration to existing fish or wildlife habitat?	_____	_____	<u>X</u>
6. Noise. Will the proposal result in:			
a. Increases in existing noise levels?	_____	<u>D</u>	_____
b. Exposure of people to severe noise levels?	_____	_____	<u>X</u>
7. Light and Glare. Will the proposal produce new light or glare?	_____	_____	<u>X</u>
8. Land Use. Will the proposal result in a substantial alteration of the present or planned land use of an area?	_____	<u>E</u>	_____
9. Natural Resources. Will the proposal result in:			
a. Increase in the rate of use of any natural resources?	_____	_____	<u>X</u>
10. Risk of Upset. Will the proposal involve:			
a. A risk of an explosion or the release of hazardous substances (including, but not limited to, oil, pesticides, chemicals or radiation) in the event of an accident or upset conditions?	<u>F</u>	_____	_____
b. Possible interference with an emergency response plan or an emergency evacuation plan?	_____	_____	<u>X</u>
11. Population. Will the proposal alter the location, distribution, density, or growth rate of the human population of an area?	_____	_____	<u>X</u>
12. Housing. Will the proposal affect existing housing, or create a demand for additional housing?	_____	_____	<u>X</u>
13. Transportation/Circulation. Will the proposal result in:			
a. Generation of substantial additional vehicular movement?	_____	<u>G</u>	<u>X</u>
b. Effects on existing parking facilities, or demand for new parking?	_____	_____	<u>X</u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
c. Substantial impact upon existing transportation systems?	_____	<u>H</u>	_____
d. Alterations to present patterns of circulation or movement of people and/or goods?	<u>I</u>	_____	_____
e. Alterations to waterborne, rail or air traffic?	_____	<u>J</u>	_____
f. Increase in traffic hazards to motor vehicles, bicyclists or pedestrians?	<u>J</u>	_____	_____
14. Public Services. Will the proposal have an effect upon, or result in a need for new or altered governmental services in any of the following areas:			
a. Fire protection?	_____	<u>K</u>	_____
b. Police protection?	_____	<u>L</u>	_____
c. Schools?	_____	_____	<u>X</u>
d. Parks or other recreational facilities?	_____	_____	<u>X</u>
e. Maintenance of public facilities, including roads?	_____	<u>G,M</u>	_____
f. Other governmental services?	<u>M,N</u>	_____	_____
15. Energy. Will the proposal result in:			
a. Use of substantial amounts of fuel or energy?	_____	_____	<u>X</u>
b. Substantial increase in demand upon existing sources or energy, or require the development of new sources of energy?	_____	_____	<u>X</u>
16. Utilities. Will the proposal result in a need new systems, or substantial alterations to the following utilities:			
	_____	_____	<u>X</u>
17. Human Health. Will the proposal result in:			
a. Creation of any health hazard or potential health hazards?	_____	<u>N</u>	_____
b. Exposure of people to potential health hazards?	_____	<u>O</u>	_____
18. Aesthetics. Will the proposal result in the obstruction of any scenic vista or view open to the public, or will the proposal result in the creation of an aesthetically offensive site open to public view?			
	_____	_____	<u>X</u>
19. Recreation. Will the proposal result in an impact upon the quality or quantity of existing recreational opportunities?			
	_____	_____	<u>X</u>

	<u>Yes</u>	<u>Maybe</u>	<u>No</u>
20. Cultural Resources.			
a. Will the proposal result in the alteration of or the destruction of a prehistoric or historic archaeological site?	<u> </u>	<u> </u>	<u> X </u>
b. Will the proposal result in adverse physical or aesthetic effects to a prehistoric or historic building, structure, or object?	<u> </u>	<u> </u>	<u> X </u>
c. Does the proposal have the potential to cause a physical change which would affect unique ethnic cultural values?	<u> </u>	<u> </u>	<u> X </u>
d. Will the proposal restrict existing religious or sacred uses within the potential impact area?	<u> </u>	<u> </u>	<u> X </u>

21. Mandatory Findings of Significance.

a. Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<u> </u>	<u> </u>	<u> X </u>
b. Does the project have the potential to achieve short-term, to the disadvantage of long-term, environmental goals? (A short-term impact on the environment is one which occurs in a relatively brief, definitive period of time while long-term impacts will endure well into the future.)	<u> </u>	<u> </u>	<u> X </u>
c. Does the project have impacts which are individually limited, but cumulatively considerable? (A project may impact on two or more separate resources where the impact on each resource is relatively small, but where the effect of the total of those impacts on the environment is significant.)	<u> </u>	<u> </u>	<u> X </u>
d. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<u> </u>	<u> X </u>	<u> </u>

III. Discussion of Environmental Evaluation
(Narrative description of environmental impacts.)

IV. Determination

(To be completed by the Lead Agency.)

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☐

I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because the mitigation measure described on an attached sheet have been added to the project.

A NEGATIVE DECLARATION WILL BE PREPARED.

☐

I find the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☒

Date

3/23/88

Signature

Robert H. Hilt

Title

Assistant to the Executive Director, HSPF

ATTACHMENT II-1
ENVIRONMENTAL CHECKLIST FORM
(INITIAL STUDY)

- A. The project may recommend construction of an incinerator which would increase air emissions in a non-attainment air basin, although the total net increase in air emissions could be less than that resulting from the continued placement of hazardous wastes in landfills. Emissions could also result from new treatment and recycling facilities, e.g., recycling of organic solvents.
- B. Regional facilities may result in the creation of objectionable odors, although siting criteria would be used to provide a buffer between the facility and adjacent land uses.
- C. Hazardous discharges of chemicals could result from accidental release of hazardous wastes at new regional facilities, or resulting from accidental releases from trucks or rail tank cars hauling wastes to the new facility (see also note G).
- D. Depending on the location of new regional facilities increased noise levels could result from truck and rail traffic.
- E. Surrounding land uses may be affected due to the hazardous nature of regional hazardous waste facilities, although siting criteria usually requires a buffer, e.g., 2000' separation, between waste facilities and areas of population concentration, particularly residential development, schools, hospitals.
- F. Although these events may occur without the proposed development of regional waste facilities, the proposed facilities may increase the relative risk to those communities where the facilities are sited.
- G/H/I/J. New regional waste facilities may result in increased traffic, particularly trucks loaded with hazardous wastes. Long-term increases in truck and rail traffic may result in increased hazard to other road users and those who live and work adjacent to roadways. However, the number, and average trip length, of truck trips could decrease if facilities are built close to the source of waste generation and/or measures are used to concentrate the wastes prior to waste transport. In addition waste minimization practices may decrease the amount of wastes that are generated and therefore reduce the number of times waste haulers are required to transport the wastes to a treatment, recycling, or repository facility.
- K/L. Those providing emergency services such as health, police, fire departments may be affected.
- M. Long-term project site monitoring to avoid contamination will also be necessary and require long-term involvement of public health agencies.
- N/O. The nature of hazardous wastes create concerns about health hazards and any proposal to site regional facilities that transfer, treat, or hold hazardous wastes, must address regional health issues. However, now facilities will likely treat and dispose of wastes in a more efficient and safer manner than the current system of landfills.

**ATTACHMENT III
SAN FRANCISCO BAY AREA
HAZARDOUS WASTE ADVISORY COMMITTEE**

George Bergman
San Mateo County, Department of Environmental Management

Will Bruhns
Regional Waster Quality Control Board, San Franciso Bay Region

Sam Caddle, Task Force Chairman
Supervisor, District III, Solano County

Robert A. Canter
The Clorox Company

Ann Coombs
Planning Commissioner, Santa Clara Co. Tanner Committee

Betty Croly
Assistant Planning Director, Alameda Co. Planning Department

Linda Curry
Hewlett Packard

Paul DeFalco
Chairman, Contra Costa Co. Hazardous Materials Commission

Phillip Duffy
Assistant Director, San Mateo Co. Environmental Health

Susa Gates
BALIA Representative, Pacific Gas & Electric

Lesly Glatt
Sierra Club

Alvin Greenberg
Risk Science Associates

Commander Chris Guild
Western Division Naval Facilities Engineering Command (Code 09B)

Ralph Hunter, Tanner Plan Coordinator
Napa County Environmental Health Department

Joseph Johnson
San Francisco Solid Waste Management Program

Dan Kauffman
Chevron Corporation

Isao Kobashi/Rory Kessler
San Jose Office of the County Executive

Meredith Klein
League of Women Voters of the Bay Area

Delores Lutter
San Mateo Co. Environmental Health

Sharon Maves
Marin Co. Planning Department

Ken Mercer
Mayor, City of Pleasanton

Linda Morse
San Francisco Solid Waste Management Program

David Okita
Senior Civil Engineer, Contra Costa County Community Development

Robert Pendoley
Director, Solano Co. Environmental Management Dept.

Thomas Perardi
Bay Area Air Quality Management District

Jack Saame
Sonoma County Tanner Commission

Peter Schneider
Romic Chemical Corporation

Christine Shacklett-Wright
Program Manager Hazardous Waste Management Planning,
Department of Health Services - Toxics Division

Ted Smith
Silicon Valley Toxics Coalition

June Snyder
East Bay Counties Dry Cleaners Assn.

Leslie Stewart
League of Women Voters of the Bay Area

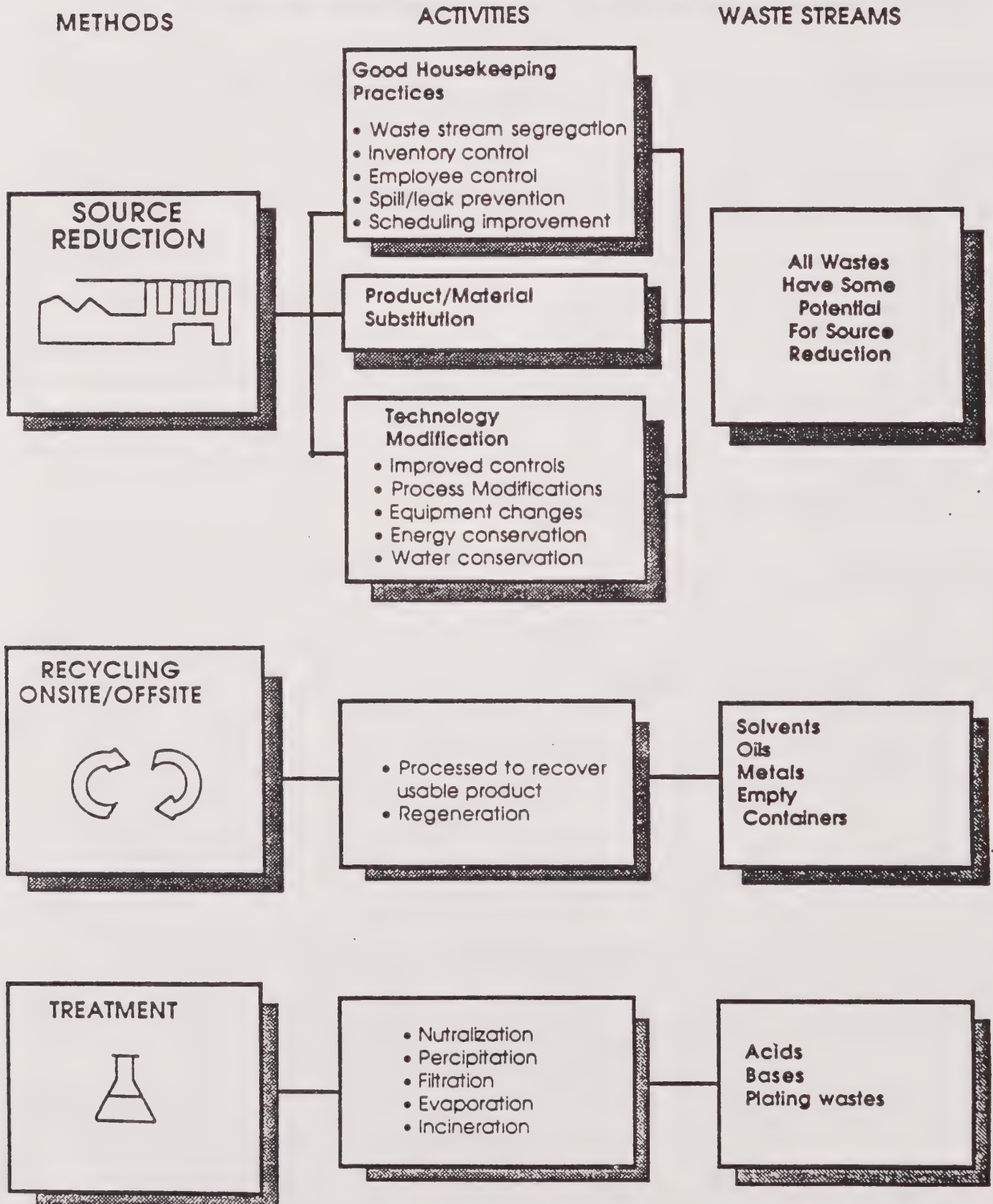
Herbert Stone
Bay Area League of Industrial Association

Michael Sweeney, Task Force Vice-chairman
City of Hayward Councilmember

Dale Turnage
Universal Engineering, Inc.

Jack Vrmeer
Sonoma Co. Public Health Department

WASTE MINIMIZATION TECHNIQUES



ATTACHMENT V

CHARACTERISTICS OF FACILITIES PERTINENT TO SITING

The following describes the basic types of facilities which may be utilized to manage hazardous wastes. Design variations of these basic types are common in managing specific types of industrial hazardous wastes, but the general descriptions which follow will illustrate the principles involved in each type¹. Each type of facility could either be established as a separate facility, or could serve as one component of a larger integrated complex (Figure 1). The types which are discussed are the following:

Transfer and storage facilities

Treatment facilities

Recycling facilities

Solidification or stabilization facilities

Incineration facilities

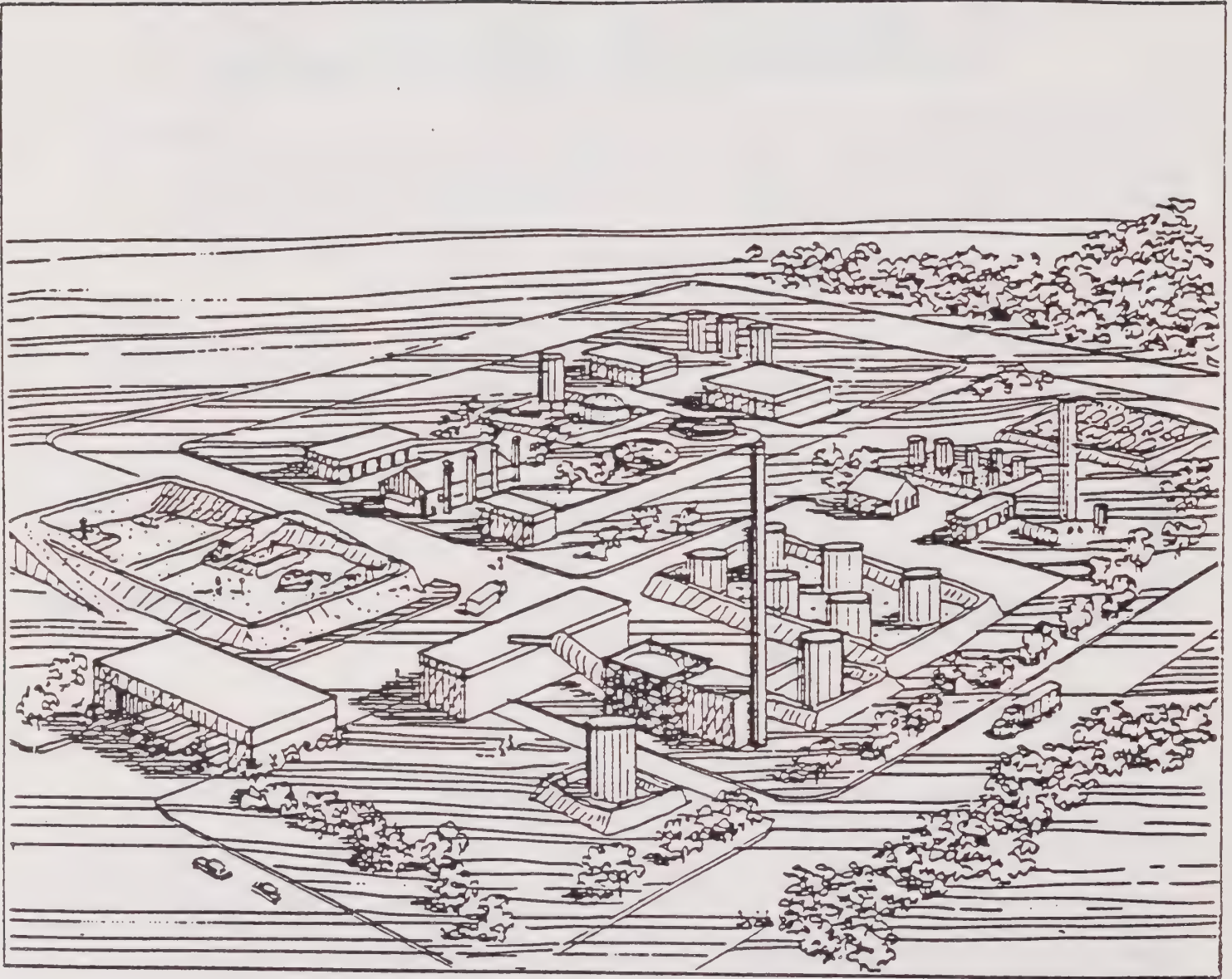
Repositories for treated residues

Waste Transfer and Storage Facilities

Hazardous waste transfer and storage facilities are essential to the overall management of hazardous wastes and it is probable that one or more should be located in each county. Typically, such facilities serve as collection stations for small quantities of waste, combining like wastes when the quantities become large enough to be economically shipped to a treatment or recycling facility. Such facilities are usually located in urban-industrial areas at or near the source of waste generation, although they may also be located in rural areas where waste volumes are typically too small from a single generator to justify shipping costs to a treatment or recycling center.

Hazardous wastes may arrive at transfer and storage stations by rail and by vacuum, flatbed or tank trucks. The waste manifest is examined and wastes

¹Figures 1, 3, 4, 5, and 6 were obtained from An Introduction to Facilities for Hazardous Waste Management; Clark-McGlennon Associates; Boston, Massachusetts; November 1980. Figure 2 provided by Gloria McGregor; McGregor-Munsey and Associates; Davis, California.



**A Hypothetical Integrated
Waste Management Facility**

FIGURE 1

are analyzed to confirm their identity, degree of hazard and compatibility with other wastes. They are then separated as liquids, solids and sludges according to their overall chemical characteristics and kept separate from incompatible wastes. Drums may be transferred directly out of the transporting vehicle to the storage area or they may be transferred by forklift from a receiving area to the storage buildings.

Uncontainerized dry, solid hazardous waste is transferred to bins or tanks by dump truck, and, in some cases, by conveyor systems. Uncontainerized liquids, sludges, or slurries are transferred by pipeline from tank trucks to the appropriate storage tanks. Wastes are subsequently transported from the center to a treatment or recovery facility, an incinerator or a stabilization unit.

Control over emissions of air pollutants at waste transfer and storage facilities is achieved by specially designed air pollution control equipment, in accordance with requirements of the local air pollution control or air quality control district. Department requirements must also be met. Some general examples of air pollution control technology include:

- * Operational controls at conveyor belts, tank and bin stacks and equipment vents.
- * Dusts and vapors are collected or contained by dust-handling and vapor recovery systems utilizing flexible boots, hoods, blowers, ducts, baghouses, scrubbers and associated equipment.
- * Tight seals are maintained at storage tanks, valves, flanges and fittings to avoid releases of liquids.
- * Inert or pacified materials are used to prevent corrosive chemicals from mixing with incompatible substances.

It should be emphasized that these control technologies do not necessarily constitute the Best Available Control Technology (BACT) which the air pollution control district may require in order to provide the maximum degree of available protection. The districts will take into account, on a case-by-case basis, energy, environmental and economic impacts, as well as technology feasibility.

Typical examples of water pollution control mechanisms include dikes, drains, curbs, impermeable floors and loading areas designed to contain possible spills. Regular monitoring of ground and surface water may be required by the Regional Water Quality Control Board to provide early warning of any leaks. (Note: Interim storage tanks may be present not only at transfer stations but at treatment and recycling facilities as well. As a result, these facilities are likely to need water quality control measures too.)

As summarized in Table 1, a typical transfer station occupies from one to ten acres and has between two and ten employees. Its annual waste throughput of 10,000 to 40,000 tons could involve weekly incoming traffic

Principal Characteristics of Typical Hazardous Waste Treatment Facilities

Facility Category	Amount Annually (in Thousands of Tons)	Amount Weekly (in Thousands of Gallons)	Minimum Number of Incoming Vehicles Per Week			Land Area (in Acres)	Number of Employees	Appearance From Outside Facility
			Trucks (4,000 Gallons Each)	Railcars (8,000 Gallons Each) ²				
Transfer station								
Small	10-15	23-110	6-23	3-14	1-3	2-5	Warehouse-style building with trucks entering to transfer material and	
Large	30-40	70-300	18-75	9-38	5-10	5-10	Storage tanks near building surrounded by dikes.	
Treatment (e.g., treatment of aqueous waste)								
Small	10-12	46-65	12-14	6-7	3-5	15-20	Raised pools or holding basins with storage tanks near a few buildings and	
Large	100-200	460-920	120-230	60-120	10-30	35-40	Surface aerators operating in open tanks and basins and	
recycling (e.g., recovery of liquid organics)								
Small	10-15	23-110	8-28	3-14	1-3	15-20	Appearance of small refinery, distillation towers, pipelines, and many storage tanks and	
Large	30-40	70-300	18-75	9-38	5-10	45-60	Two industrial buildings and visible dikes surrounding tank storage area and	
Occasional visible venting of steam from distillation equipment and								
Warehouse-style building with trucks entering to transfer material								

1

Assuming that all wastes are transported by trucks

2

Assuming that all wastes are transported by train.

1 Assuming that all wastes are transported by trucks
2 Assuming that all wastes are transported by train.

ATTACHMENT V

CHARACTERISTICS OF FACILITIES PERTINENT TO SITING

The following describes the basic types of facilities which may be utilized to manage hazardous wastes. Design variations of these basic types are common in managing specific types of industrial hazardous wastes, but the general descriptions which follow will illustrate the principles involved in each type¹. Each type of facility could either be established as a separate facility, or could serve as one component of a larger integrated complex (Figure 1). The types which are discussed are the following:

Transfer and storage facilities

Treatment facilities

Recycling facilities

Solidification or stabilization facilities

Incineration facilities

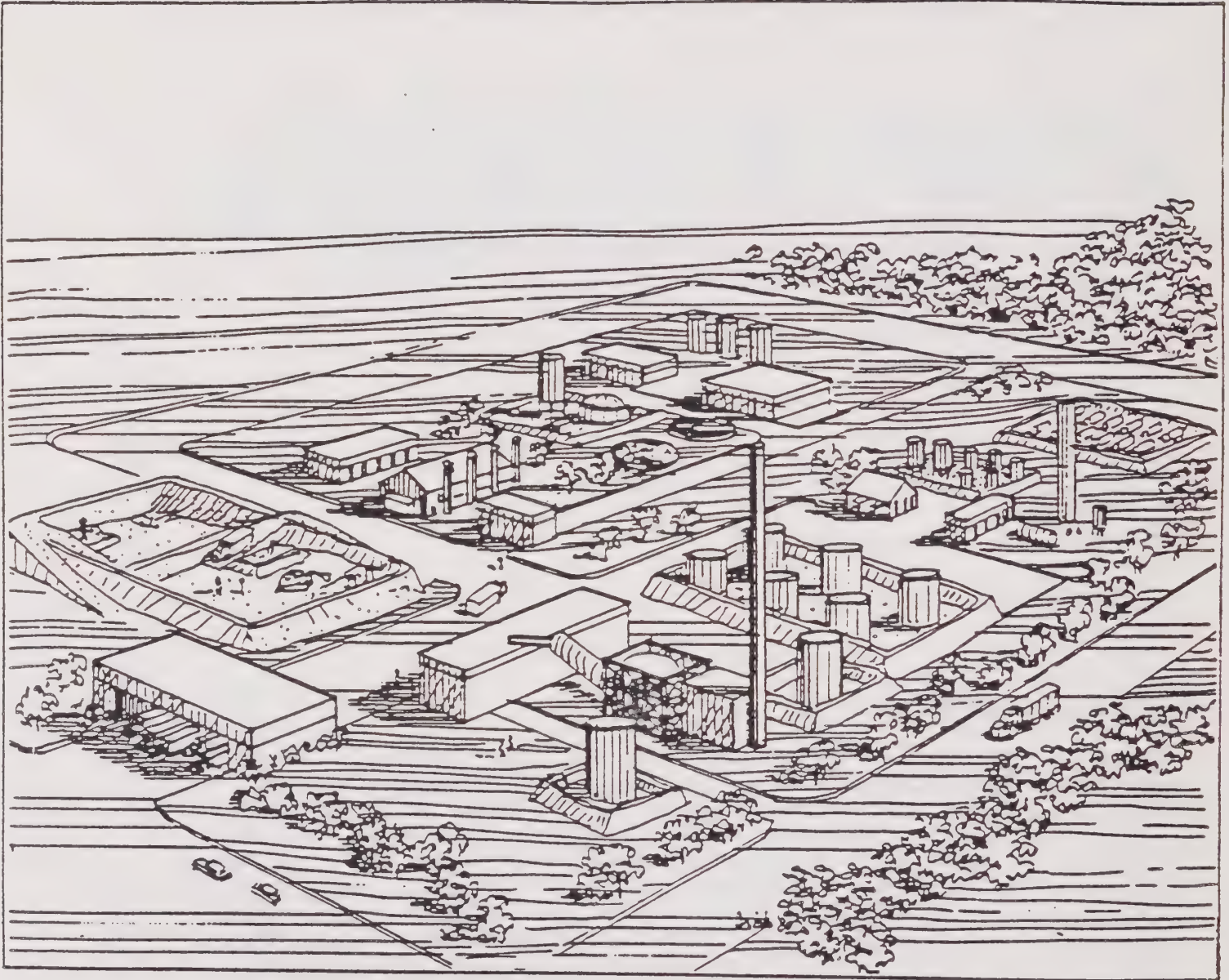
Repositories for treated residues

Waste Transfer and Storage Facilities

Hazardous waste transfer and storage facilities are essential to the overall management of hazardous wastes and it is probable that one or more should be located in each county. Typically, such facilities serve as collection stations for small quantities of waste, combining like wastes when the quantities become large enough to be economically shipped to a treatment or recycling facility. Such facilities are usually located in urban-industrial areas at or near the source or waste generation, although they may also be located in rural areas where waste volumes are typically too small from a single generator to justify shipping costs to a treatment or recycling center.

Hazardous wastes may arrive at transfer and storage stations by rail and by vacuum, flatbed or tank trucks. The waste manifest is examined and wastes

¹Figures 1, 3, 4, 5, and 6 were obtained from An Introduction to Facilities for Hazardous Waste Management; Clark-McGlennon Associates; Boston, Massachusetts; November 1980. Figure 2 provided by Gloria McGregor; McGregor-Munsey and Associates; Davis, California.



**A Hypothetical Integrated
Waste Management Facility**

FIGURE 1

are analyzed to confirm their identity, degree of hazard and compatibility with other wastes. They are then separated as liquids, solids and sludges according to their overall chemical characteristics and kept separate from incompatible wastes. Drums may be transferred directly out of the transporting vehicle to the storage area or they may be transferred by forklift from a receiving area to the storage buildings.

Uncontainerized dry, solid hazardous waste is transferred to bins or tanks by dump truck, and, in some cases, by conveyor systems. Uncontainerized liquids, sludges, or slurries are transferred by pipeline from tank trucks to the appropriate storage tanks. Wastes are subsequently transported from the center to a treatment or recovery facility, an incinerator or a stabilization unit.

Control over emissions of air pollutants at waste transfer and storage facilities is achieved by specially designed air pollution control equipment, in accordance with requirements of the local air pollution control or air quality control district. Department requirements must also be met. Some general examples of air pollution control technology include:

- * Operational controls at conveyor belts, tank and bin stacks and equipment vents.
- * Dusts and vapors are collected or contained by dust-handling and vapor recovery systems utilizing flexible boots, hoods, blowers, ducts, baghouses, scrubbers and associated equipment.
- * Tight seals are maintained at storage tanks, valves, flanges and fittings to avoid releases of liquids.
- * Inert or pacified materials are used to prevent corrosive chemicals from mixing with incompatible substances.

It should be emphasized that these control technologies do not necessarily constitute the Best Available Control Technology (BACT) which the air pollution control district may require in order to provide the maximum degree of available protection. The districts will take into account, on a case-by-case basis, energy, environmental and economic impacts, as well as technology feasibility.

Typical examples of water pollution control mechanisms include dikes, drains, curbs, impermeable floors and loading areas designed to contain possible spills. Regular monitoring of ground and surface water may be required by the Regional Water Quality Control Board to provide early warning of any leaks. (Note: Interim storage tanks may be present not only at transfer stations but at treatment and recycling facilities as well. As a result, these facilities are likely to need water quality control measures too.)

As summarized in Table 1, a typical transfer station occupies from one to ten acres and has between two and ten employees. Its annual waste throughput of 10,000 to 40,000 tons could involve weekly incoming traffic

Principal Characteristics of Typical Hazardous Waste Treatment Facilities

Facility Category	Amount Annually (in Thousands of Tons)	Amount Weekly (in Thousands of Gallons)	Minimum Number of Incoming Vehicles Per Week			Land Area (in Acres)	Number of Employees	Appearance From Outside Facility
			Trucks (4,000 Gallons Each)	Railcars (8,000 Gallons Each)				
Transfer station								
Small	10-15	23-110	6-23	3-14	1-3	2-5	Warehouse-style building with trucks entering to transfer material	
Large	30-40	70-300	18-75	9-38	5-10	5-10	Storage tanks near building and surrounded by dikes.	
Treatment (e.g., treatment of aqueous waste)								
Small	10-12	46-65	12-14	6-7	3-5	15-20	Raised pools or holding basins with storage tanks near a few buildings	
Large	100-200	460-920	120-230	60-120	10-30	35-40	Surface aerators operating in open tanks and basins and Warehouse-style building with trucks entering to transfer material.	
Recycling (e.g., recovery of liquid organics)								
Small	10-15	23-110	6-28	3-14	1-3	15-20	Appearance of small refinery, distillation towers, pipelines, and many storage tanks	
Large	30-40	70-300	18-75	9-38	5-10	45-60	Two industrial buildings and Visible dikes surrounding tank storage area and Occasional visible venting of steam from distillation equipment and Warehouse-style building with trucks entering to transfer material.	

1

Assuming that all wastes are transported by trucks

2

Assuming that all wastes are transported by train.

1 Assuming that all wastes are transported by trucks
2 Assuming that all wastes are transported by train.

Facility Category	Amount Annually (in Thousands of Tons)	Amount Weekly (in Thousands of Gallons)	Minimum Number of Incoming Vehicles Per Week			Land Area (in Acres)	Number of Employees	Appearance From Outside Facility
			Trucks (4,000 Gallons Each)	Railcars				
				(8,000 Gallons Each)				
Solidification or Stabilization	Small	5-15	16-47	4-12	2-6	1-2	5-10	Industrial building with silos nearby for storage of dry chemicals
	Large	50-100	160-310	40-78	20-39	5-10	26-30	Warehouse-style building with trucks entering to transfer material.
Incineration	Small	5-10	12-76	3-19	2-10	4-6	2-3	Tall smokestack which emits steam and
	Large	60-70	140-530	35-130	13-65	8-10	2-12	Visible storage tanks for waste and Warehouse-style building with trucks entering to transfer material.
Repository for treated residues	Small (25- to 50-year life span)	10-20	No liquids	9-18	5-9	50-100	15-20	Area surrounded by five-foot-high landscaped berm partially covered by Quonset hut-shaped moveable roof.
	Large (50- to 60-year span)	40-60	No liquids	36-54	18-27	200-300	20-25	

1 Assuming that all wastes are transported by trucks.

2 Assuming that all wastes are transported by train.

TABLE 1 (Cont'd)

ranging from 6 to 75 or more trucks, or 3 to 38 or more rail cars. This level of transportation activity may increase noise and congestion in the vicinity of the facility. Overall, however, the impacts of such a facility upon the community can be expected to be minimal, given modern emissions control technologies and good management procedures. An emergency response plan would be an integral part of this facility's basic hazardous waste management plan.

As illustrated in Figure 2, a typical waste transfer and storage facility will be distinguished primarily by its storage tanks, surrounded by protective dikes. In many industrial areas, these tanks and the warehouse-style truck transfer building often would be visually compatible with their surroundings.

Treatment Facilities (Example: Aqueous Hazardous Waste Treatment Facilities)

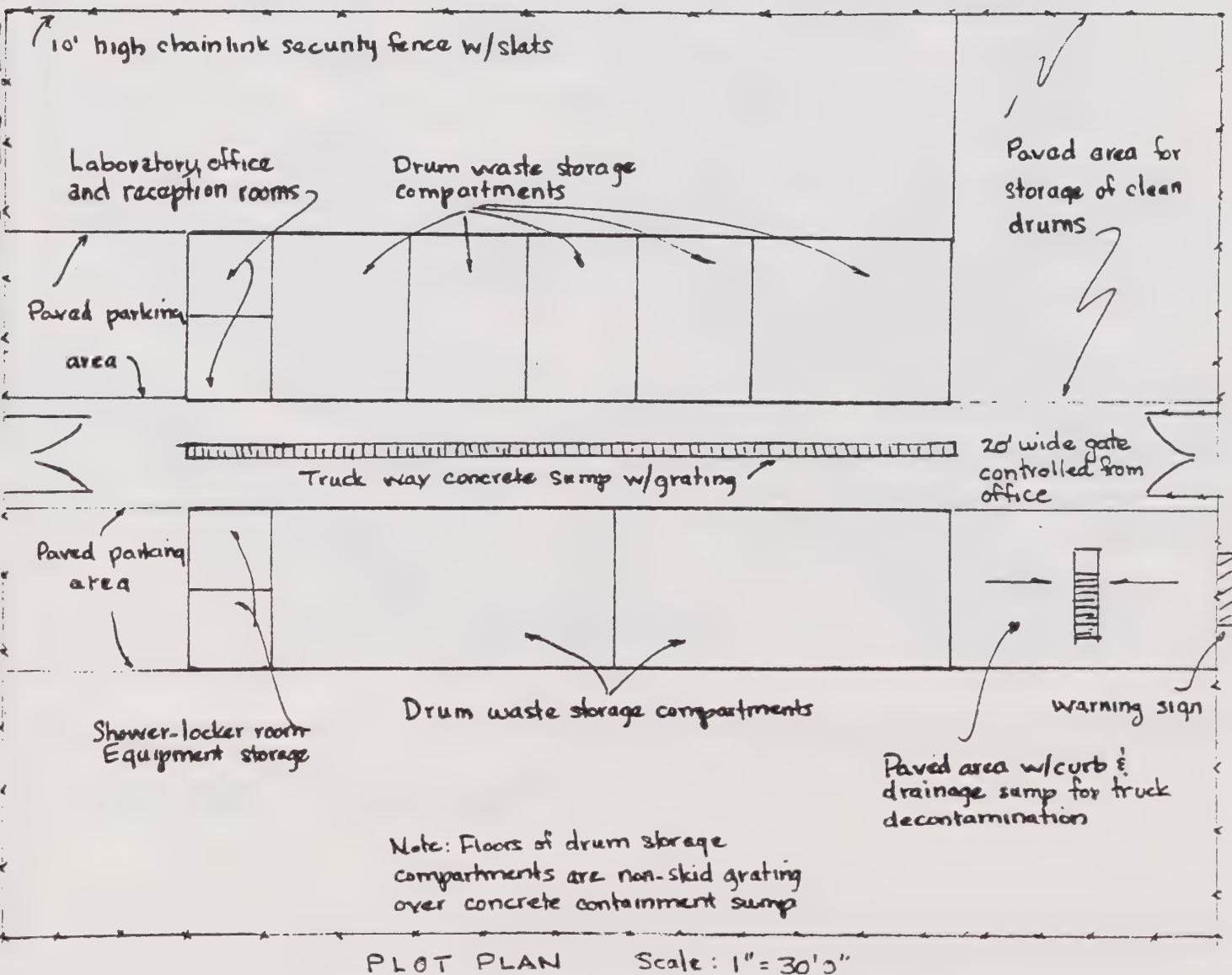
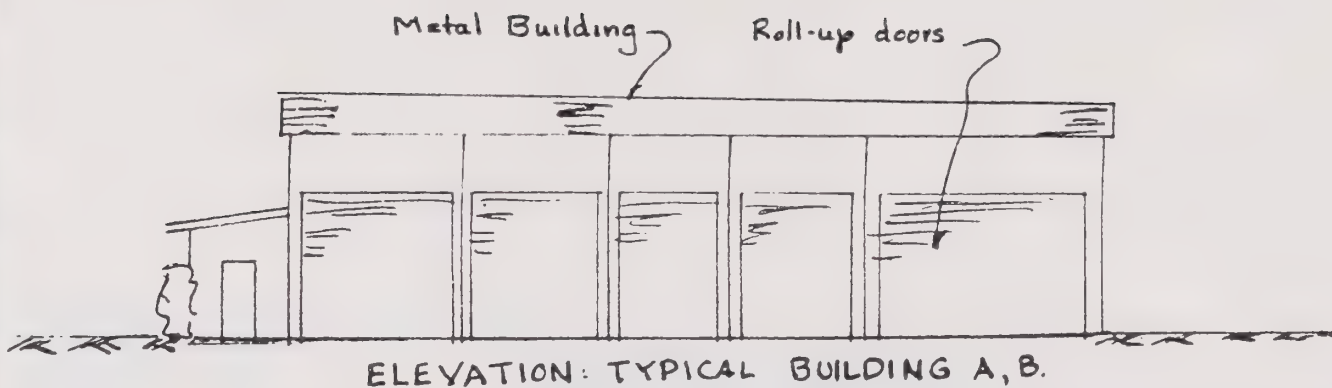
A small liquid waste treatment facility might cover only 3 acres, whereas a large one might require 30 acres. Such advanced waste treatment technologies typically employ from 15 to 40 trained workers. A large facility can treat up to 200,000 tons of liquid wastes annually. This would imply the arrival of at least 185 tanker trucks or 120 railcars every week. Smaller treatment facilities would have commensurately lower traffic volumes. As shown in Figure 3, an aqueous treatment center visually resembles a typical municipal sewage treatment plant.

Water contaminated with hazardous wastes arrives at a treatment facility from a transfer station, from a liquid organics recovery facility or, at times, directly from a large waste-generating industry. Various processes are then employed to remove heavy metals, reactive ions, and organic matter. Acid and alkaline wastes undergo pretreatment in separate unloading basins. The segregated wastes are then neutralized and/or oxidized to precipitate metals or to detoxify selected chemicals. Treated wastewater effluent is discharged either to a sewer or to an evaporation pond. The sludges that are formed are sent to an incinerator or to a biological waste converter, or are stabilized for subsequent land disposal.

Air pollution control techniques are applied and containment facilities are designed to prevent releases of wastewater to surface or groundwater. Monitoring of air emissions and local groundwater is practiced as appropriate (as required in the facility's operations permit). Again, monitoring may be required by the RWQCB on a case-by-case basis.

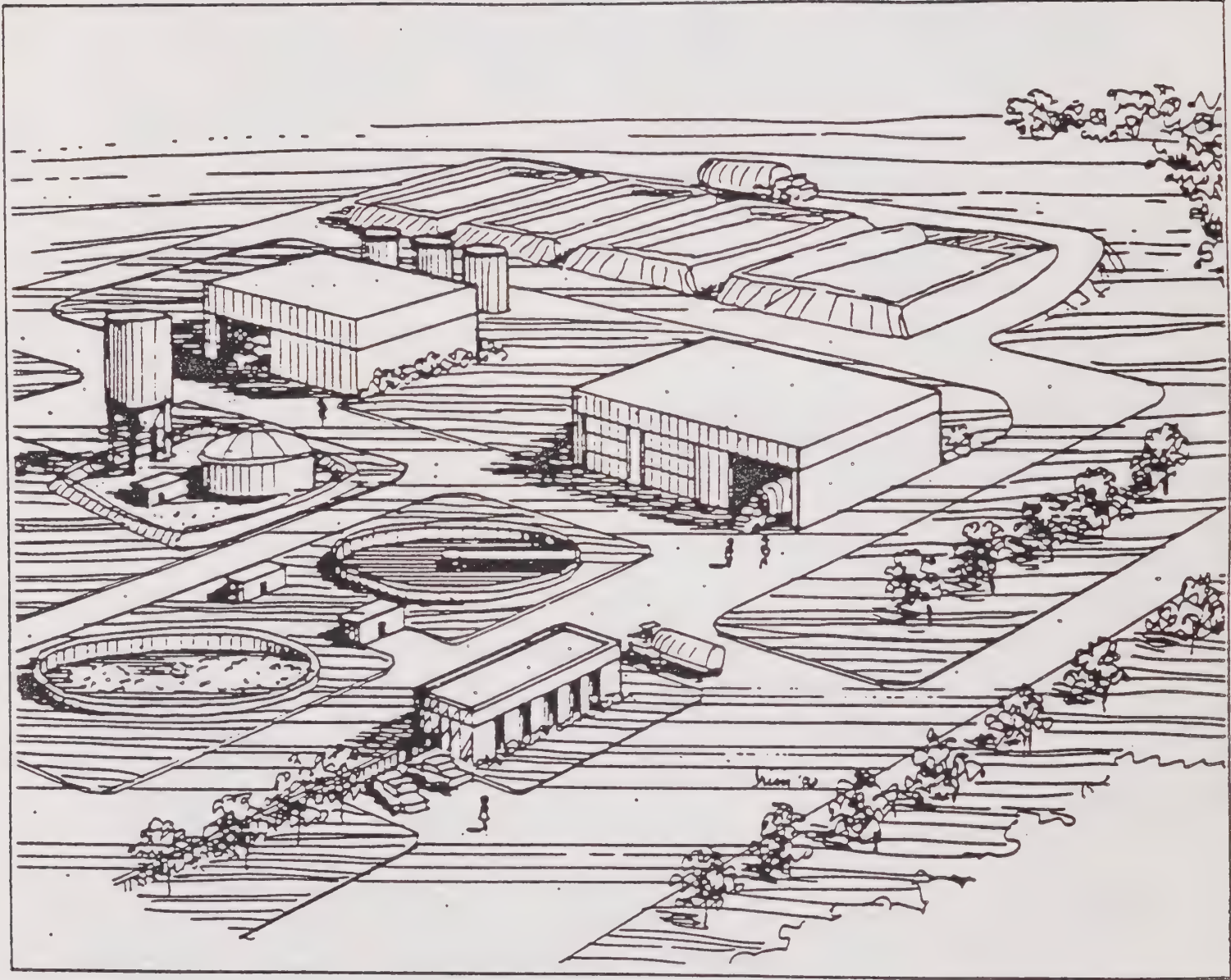
Recycling (Example: Organics Recovery Facilities)

Facilities for recovery of liquid organics, solvent distillation, and oil rerefining have many similarities to a small refinery or petrochemical plant. To the ordinary observer, the many storage tanks, pipelines, or distillation towers illustrated in Figure 4 would be indistinguishable from a modern products refinery. Occasional venting of steam from distillation equipment would simply reinforce this impression.



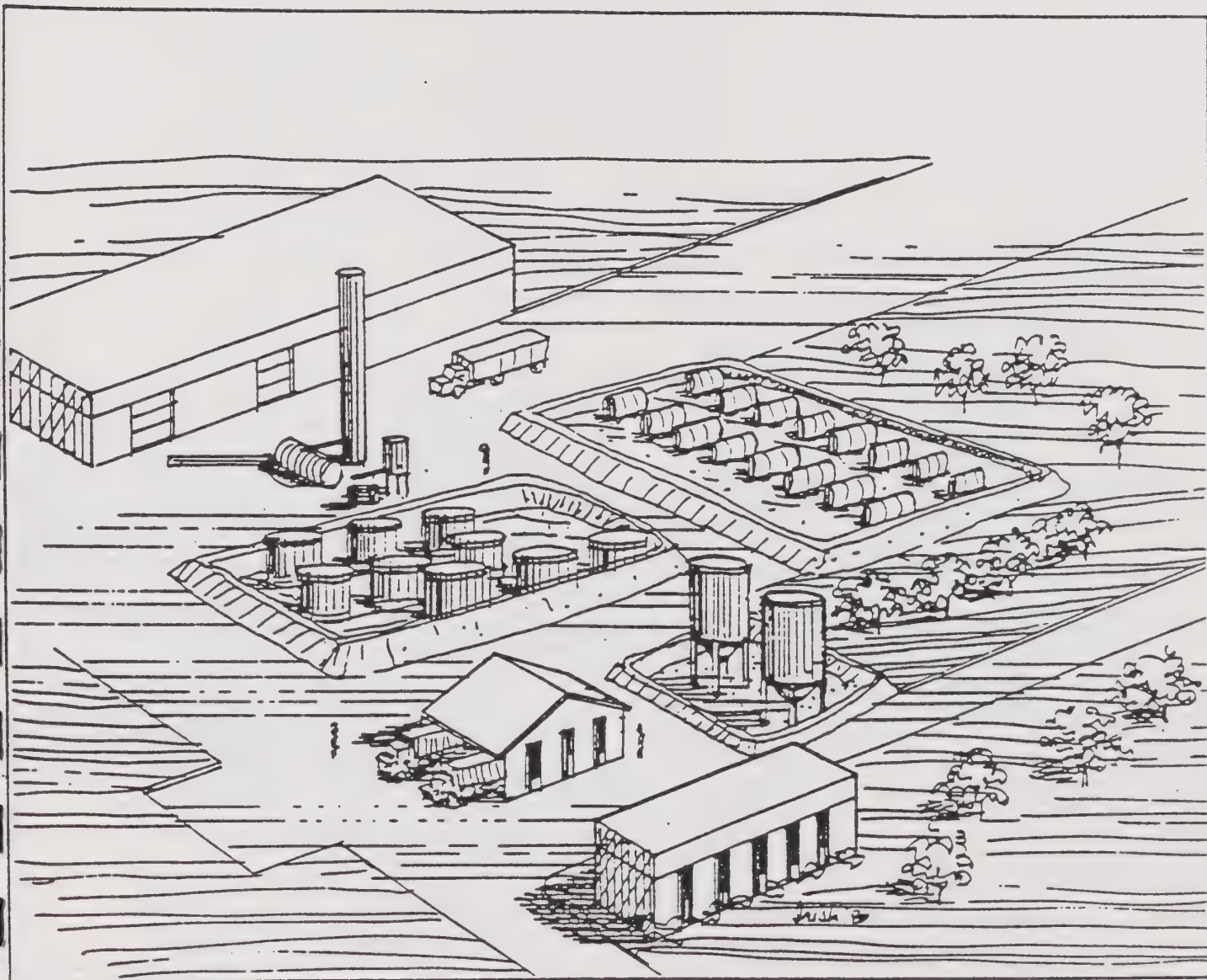
TRANSFER AND STORAGE FACILITY

FIGURE 2



Aqueous Treatment

FIGURE 3



Liquid Organics Recovery

FIGURE 4

The typical liquid organics recovery facility could cover between one and ten acres. Employment would range from 15 to 60 individuals. The size of waste throughput and resulting truck or rail traffic would be roughly equivalent to that found at a typical waste transfer and storage facility.

Liquid hazardous wastes containing solvents, oils, and other organics arriving at the recovery facility are analyzed at an on-site laboratory to identify those constituents valuable enough to recycle. Decisions are made regarding those components which will be reclaimed, incinerated, or converted to usable or stable residues. Solvents and oils are separated and clarified, respectively, by physical processes such as distillation/condensation and filtration. Toxic vapors are destroyed by incineration or collected on adsorbents. The purified solvents and oils are stored, recycled, blended into fuels, or shipped out as industrial raw materials. Residues or sludges from this facility are incinerated, extracted for metals, or "stabilized" prior to land disposal. Wastes remaining after recovery procedures have been completed are then sent to an aqueous waste treatment facility for further processing.

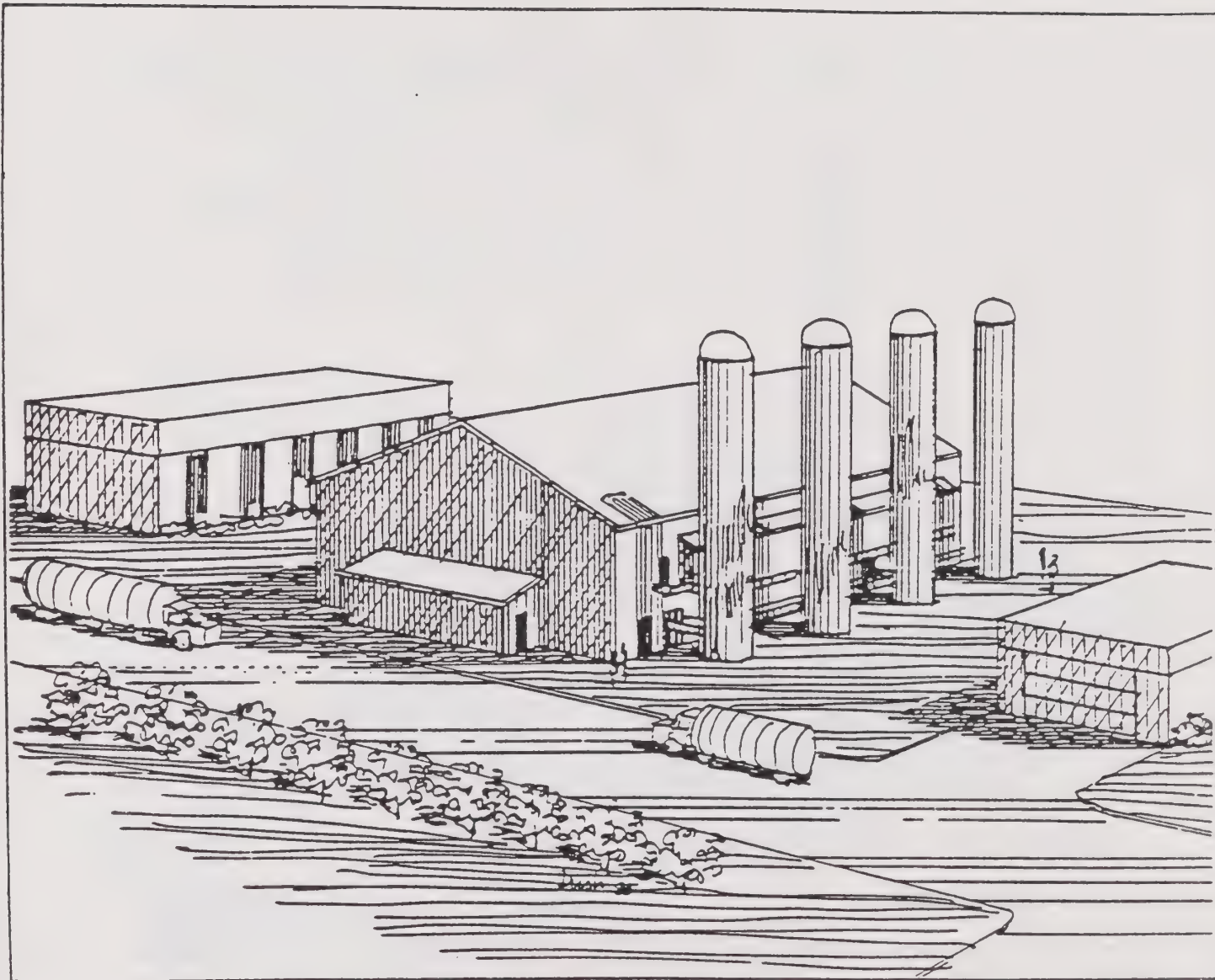
As at transfer and storage facilities, good seals at flanges, valves, and fittings are relied upon to prevent emissions of harmful vapors from organics recovery facilities. Again, possible leaks or spills would be contained by dikes, drains, and basins. Detectors, alarms, and process controls monitor air emissions and water effluents. An emergency response plan is developed for the facility as for all hazardous waste management facilities. Storage tanks and transfer lines utilize vapor recovery and vacuum transfer. With equipment properly operating, no odors, fires, or explosions are anticipated from a recovery facility, however, steam plumes from its operations will be visible.

Solidification and Stabilization Facilities

Some hazardous wastes that cannot be recycled, treated, or destroyed can be solidified or "stabilized". Liquid wastes and sludges can be solidified by use of special additives. Inorganic sludges can be fixed by adding lime and fly ash. Other wastes can be encapsulated in asphalt or plastic (polymer) coatings for lengthy storage or ultimate retrieval.

Any solidified waste should pass a standardized leachate test to ensure nonmigration of harmful constituents when eventually placed in a residuals repository. Monitoring of air emissions from the encapsulation process and of water effluents from a solidification pond is necessary to maintain environmental standards. Containment of spills or leakage would be required.

As shown in Figure 5, a solidification facility would be seen as a large industrial building with several tall silos attached for storage of dry chemicals. These facilities range in size from 1 to 10 acres and employ from 5 to 30 individuals. A wide range of waste throughput is again possible, from a low of 5,000 tons per year of material to be solidified, up to as much as 100,000 tons per year. Transportation requirements would vary as a function of the quantities of waste actually being handled.



Solidification

FIGURE 5

Incinerators

Organic liquids and solids that cannot be reclaimed economically may be burned in incinerators. Liquid feedstreams are filtered and solids shredded prior to entry of the wastes into the incinerator. Satisfactory destruction efficiency requires adequate temperature, time, and turbulence. Thus, hazardous waste incinerators include well-designed primary heating and secondary after-burner zones. While a fixed-hearth burner with liquid injection can be used for liquids, a rotary kiln has the added advantage of good mixing and residence time for solid hazardous wastes. Many waste streams have sufficient heat of combustion to reduce the cost of incineration through recovery of heat as process steam or by cogeneration of electricity.

Figure 6 illustrates a typical rotary kiln incinerator. Such a facility has some obvious visual and aesthetic impacts. The tall smokestack is evident, as are storage tanks and support buildings. Careful operation of the incinerator is mandatory; this includes good monitoring of the quality of the waste feed-streams, the stack exhaust, and the "bottoms" residue. Spill containment and establishment of an emergency response plan are included in this facility's management plan. Cyclones and electrostatic precipitators or baghouses may be needed to trap fly ash and aerosols to avoid their entry into the atmosphere. Scrubbers or alkaline additives may be required to limit acidic gases to acceptable levels.

As described in Table 1, incinerator operations typically require from 4 to 10 acres of land and employ from 2 to 12 individuals. A small incinerator might destroy 5,000 tons of waste per year, necessitating only perhaps 5 truckloads of waste per week. A large incinerator could handle up to 100,000 tons annually, and be served by 92 trucks per week.

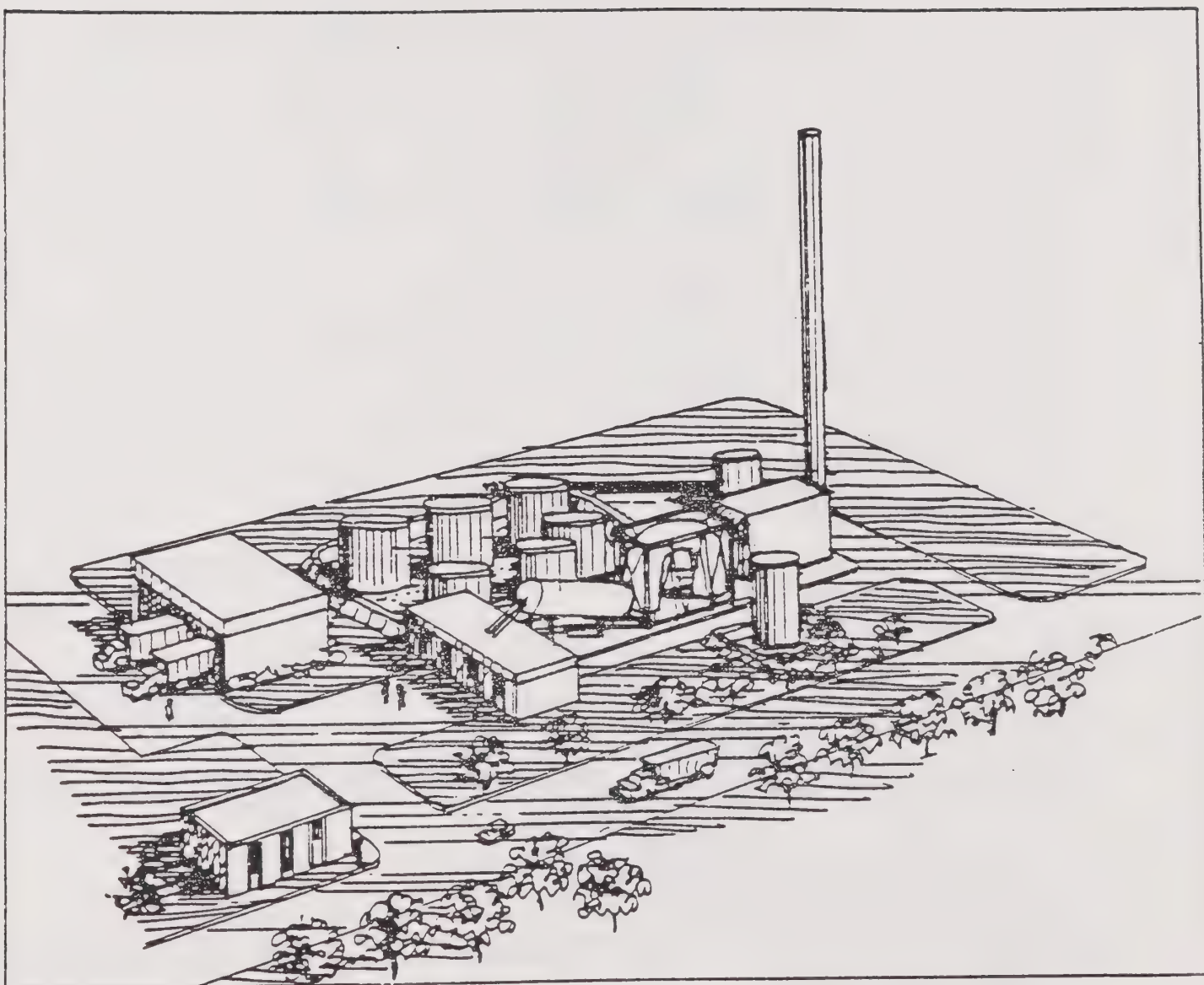
Repositories for Treated Residues

A repository for treated residues would be sited only in an area meeting the geologic and other requirements of the State Water Resources Control Board for Class I waste management units for hazardous waste (Section 2531, et seq., of Title 23, California Administrative Code). Additionally, a repository for treated residues would have the following features:

The material accepted for deposition would be subject to three principal limitations:

1. Only solid materials resulting from the treatment of hazardous wastes are acceptable;
2. No free liquids would be accepted; and
3. Hazardous organic wastes would not be acceptable unless stabilized or solidified and encapsulated.

The design and operation of the facility would be such as to keep the residuals dry as practical to prevent the formation of leachate.



Rotary Kiln Incineration

FIGURE 6
V-13

By adhering to the above, a residuals repository is set apart from the traditional Class I facility, and is more environmentally benign.

The Southern California Hazardous Waste Management Project commissioned a conceptual design and feasibility study¹ of a 200-acre facility to receive and deposit 160,000 cubic yards of residual materials per year for 25 years, the design life of the facility (See Figure 7 for conceptual design). Three distinct types of cells were devised for residuals emplacement, as follows:

1. Main Cells: Four cells of approximately 530 feet by 1,600 feet dimensions and having a total height of 60 feet would be constructed. Construction would proceed downgradient at a pace commensurate with the receipt of residuals.
2. Weather Cells: Three cells of approximately 120 feet by 800 feet dimension and having a total height of 20 feet would be constructed. A mobile, permanent roof structure would be used to cover the active deposition area to prevent precipitation from reaching the residues.
3. Special Purpose Cells: Three cells sized and operated as wet weather cells would be constructed to dispose of residues which are judged to have a relatively high potential for recovery at some future time to obtain the values of metals contained in the wastes.

Major cells would be operated during the normal dry weather in order to promote drying of the residual prior to final cover. During periods of rain, temporary sheeting would be used to keep the cells dry. Permanent closure would be accomplished as the residuals are received.

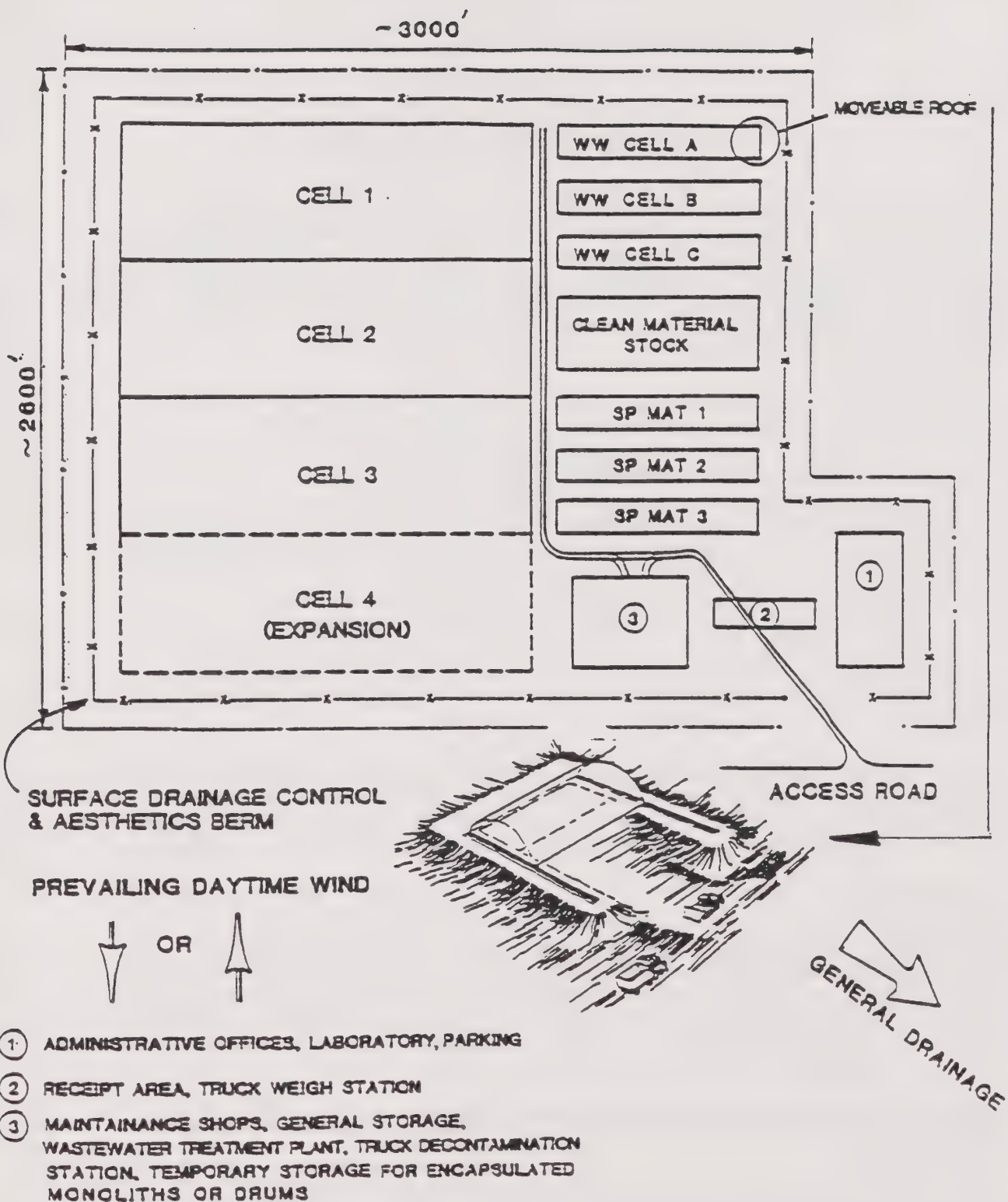
The concept for a residuals repository applies only to those solid materials resulting from the treatment of hazardous wastes. Generally, the residual treatment solids will be inorganic and will be oxidized byproducts of various waste treatment processes. They may also have high concentrations of heavy metals which may be stabilized into a relatively nonreactive form.

The residuals are solids, their organic content is low, their toxic inorganic components are relatively insoluble, and are among the most inert and least mobile wastes presented for land disposal. Thus, a properly designed and well operated residuals repository should present very low environmental risk.

Environmental Controls at Hazardous Waste Facilities

All hazardous waste management facilities, by their very nature, can potentially produce adverse environmental impacts. While the specific

¹D'Appolonia Waste Management Services, Residuals Repository Conceptual Design and Feasibility Study, February 1984.



RESIDUALS REPOSITORY

IN ACTUAL PRACTICE, EXTERIOR BERMING
WOULD BE SHAPED IN PLAN AND ELEVATION
TO PRESENT A MORE NATURAL APPEARANCE

FIGURE 7

impacts may vary as a function of the facility's specific characteristics and actual wastes to be treated, impacts from modern hazardous waste treatment facilities typically resemble those found at industrial facilities engaged in manufacturing or petrochemical processing. In some instances, federal or state regulations require more stringent pollution controls at hazardous waste treatment facilities than at industrial plants where many of the wastes are actually generated.

All waste treatment facilities in California must be designed and operated to incorporate environmental control measures which conform to the standards, regulations, and permit conditions of the local air pollution control district or the local air quality management district, and the Department and comply with the Uniform Building Code, Uniform Fire Code, and National Fire Codes. Standards and regulations of the U. S. Environmental Protection Agency (EPA) concerning hazardous waste facilities are imposed in California by the Department (as required for the Department to obtain and maintain interim authorization from EPA pursuant to RCRA). Regulatory inspection, monitoring, and enforcement requirements for these facilities are set by the Department and the local air pollution control district or the local air quality management district. Local health officers are authorized by statute to enforce the Department's regulations and permit conditions.

All facilities must sample and analyze incoming waste materials and outgoing effluent discharges. The operations plan upon which the hazardous waste facility's permit is based must identify appropriate measures to separate treatable from untreatable wastes, and to separate incompatible materials.

All hazardous waste treatment facilities in the State must have emergency response equipment available for the control and cleanup of spills. In addition, facilities handling flammable wastes must have on hand fire extinguishers and other fire control equipment. Further, all facilities have to protect nearby surface and groundwaters by undertaking certain measures around all storage tanks and in all areas where spills can occur, including:

- . Dikes or curbing around the area to contain the spill;
- . Drains inside and outside buildings to transport spillage to ponds or covered tanks;
- . Channels outside of these spill containment areas to move any spillage to a common collection pond or holding basin; and
- . Lighting to allow detection of leaks and spills at night.

Additional environmental protection measures are specific to the kind of hazardous waste treatment facility. Some of the principal issues that may be covered by the local air pollution control district or the local air quality management district, by the Department, or by a Regional Water Quality Control Board are summarized in Tables 2 through 5.

TABLE 2

Environmental Protection Measures at
Transfer and Storage Facilities

<u>Type of Measure</u>	<u>Description of Measure</u>
Sampling and analysis procedures	Ensure that runoff is confined through automatic analysis of drainage tied into alarms, and an electronically activated shut-off system.
Inspections	<u>Daily</u>
	Inspect drums and tanks for leaks.
	Inspect level of liquid in tanks and lagoons.
	Inspect seams, valves, and pumps.
	Inspect the overall condition of tanks.
	<u>Annual</u>
	Water-fill and pressure-test tanks to detect any leakage.
Air pollution controls	Install and operate controls at the waste-transfer building.
	. Baghouse to control particulate emissions.
	. Vapor recovery system or carbon canisters to adsorb organic vapors.
	Maintain closed storage of all volatile materials.
	Control emissions at tanks containing volatile materials.
	. Scrubbers to cleanse vapors.
	. Inert gas blanketing or floating roofs.

TABLE 3

Environmental Protection Measures at
Organics Recovery Facilities

<u>Type of Measure</u>	<u>Description of Measure</u>
Sampling and analysis	Sample and analyze air emissions at distillation, refining, and fuel-blending facilities.
Monthly calibrations	Calibrate process control and emissions control devices.
Air pollution controls	Recycle vapors from boiling liquids through condensers for cooling, liquifaction, and subsequent use. Cool unusable residuals for subsequent incineration or burial elsewhere. Use vacuum equipment to prevent leaks. Nonvolatile liquid blanketing.
Water pollution controls	Install a structurally sound containment structure impervious to and compatible with wastes at the facility, and monitor its adequacy. Monitor nearby groundwater. Prevent spillovers by using level-detection devices on tanks and lagoons tied in to pump cutoff switches and alarms.

TABLE 4

Environmental Protection Measures at
Aqueous Waste Treatment Facilities

<u>Type of Measure</u>	<u>Description of Measure</u>
Sampling and analysis procedures	Conduct automatic analysis of effluents, tied into electronically activated emergency shutoffs. Sample all products of processes, and all vapors.
Air pollution control	Aerate odorous wastes in a building equipped with a foul-air scrubber.
Inspections	<u>Daily</u>
	Inspect emergency shut-off and safety devices.
	Update process control and operational data.
	<u>Weekly</u>
	Inspect construction materials at chemical reactors.
	Inspect dikes around tanks.
	<u>Monthly</u>
	Calibrate process control devices and emissions control devices.

TABLE 5

Environmental Protection Measures at Incinerators

<u>Type of Measure</u>	<u>Description of Measure</u>
Sampling and analysis procedures	Conduct automatic analysis of gases for toxic chemicals, carbon monoxide, oxides of nitrogen and sulfur, and opacity, tied in to electronically activated emergency shut-off mechanism. Periodically analyze residues from incineration.
Air pollution controls	Use afterburner or catalytic oxidizer to heat exhaust gases from the combustion area to a temperature that converts organics to inorganics and inert gases.
	Use an electrostatic precipitator or baghouse to remove particulates from exhaust gas.
	Use a mist of water and chemicals in a scrubber to remove chemicals from exhaust gas.
Inspections	<u>Every 15 Minutes</u>
	Inspect combustion and emissions control devices.
	<u>Hourly</u>
	Inspect plume from stack (use an opacity meter).
	<u>Daily</u>
	Inspect safety devices.
	Inspect emergency shutoffs of feed streams.
	Inspect pipelines and pumps.
	Update process control and operational data (e.g., temperature, pressure, and flow rates).
	<u>Monthly</u>
	Calibrate process control devices and emissions control devices.

U.C. BERKELEY LIBRARIES



C124896644

